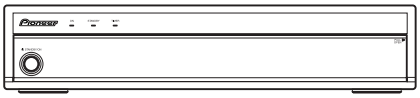
Pioneer sound.vision.soul

Service Manual



PDP-R06G

ORDER NO.
ARP3281

MEDIA RECEIVER

PDP-R06G
PDP-R06C

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-R06G	TLDFXJ	AC 110V - 240V	
PDP-R06C	WAXU5	AC 220V - 240V	

For details, refer to "Important Check Points for good servicing".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T-IZR SEPT. 2005 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

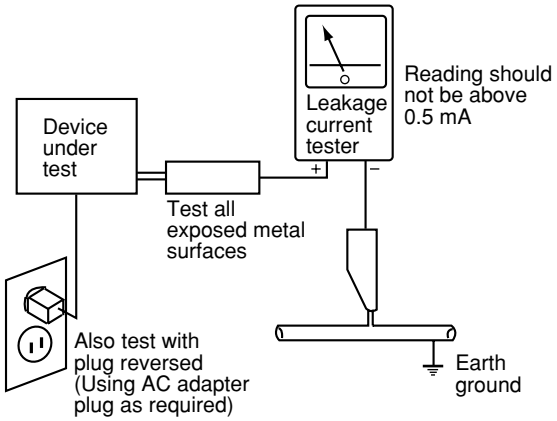
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

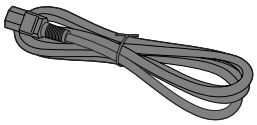
1. SPECIFICATIONS

Item			Media Receiver, Model: PDP-R06G
Color System			PAL/SECAM/NTSC/4.43NTSC/PAL-M/PAL-N
TV Function	Receiving System		PAL: B/G, D/K, I M, N SECAM: B/G, D/K NTSC: M 4.43NTSC : M
	Tuner	VHF/UHF	44.25-863.25 MHz
		CATV	Hyper-band, S1-S41ch
	Auto Channel Preset		99 ch (Normal), 68 ch (Air, US type), 125 ch (Cable, US type), Auto Preset
	Audio multiplex		NICAM/A2/BTSC System
Terminals	Rear	INPUT 1	COMPONENT VIDEO in, S-VIDEO in, AV in
		INPUT 2	COMPONENT VIDEO in, S-VIDEO in, AV in
		INPUT 3	S-VIDEO in, AV in, HDMI in*
		Antenna	75 Ω Din Type for VHF/UHF in
	Front	INPUT 4	S-VIDEO, AV in (Audio input is shared with PC INPUT.)
		PC	Analog RGB in
MONITOR OUT Terminal (Rear)			AV out
PHONES OUTPUT Terminal (Front)			16 - 32 Ω recommended
SUB WOOFER OUTPUT Terminal (Rear)			Variable
Power Requirement			110 - 240 V(PDP-R06G), 220 - 240V(PDP-R06C) , 50/60 Hz, 16 W (0.4 W Standby)
Dimensions			420 (W) × 90 (H) × 299 (D) mm
Weight			3.4 kg

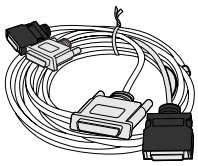
∗ **:** This conforms to HDMI1.1 and HDCP1.1.
HDMI (High Definition Multimedia Interface) is a digital interface that handles both video and audio using a single cable.
HDCP (High-bandwidth Digital Content Protection) is a technology used to protect copyrighted digital contents that use the Digital Visual Interface (DVI).

● Design and specifications are subject to change without notice.

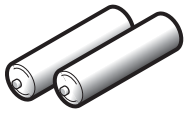
Accessories



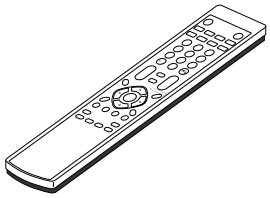
Power cord
(ADG1209: PDP-R06C)



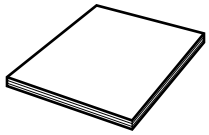
System cable (3 m)
(ADF1027)



AA size Battery ×2
(VEM1031: PDP-R06G)
(VEM1010: PDP-R06C)



Remote control unit
(AXD1510: PDP-R06G)
(AXD1511: PDP-R06C)

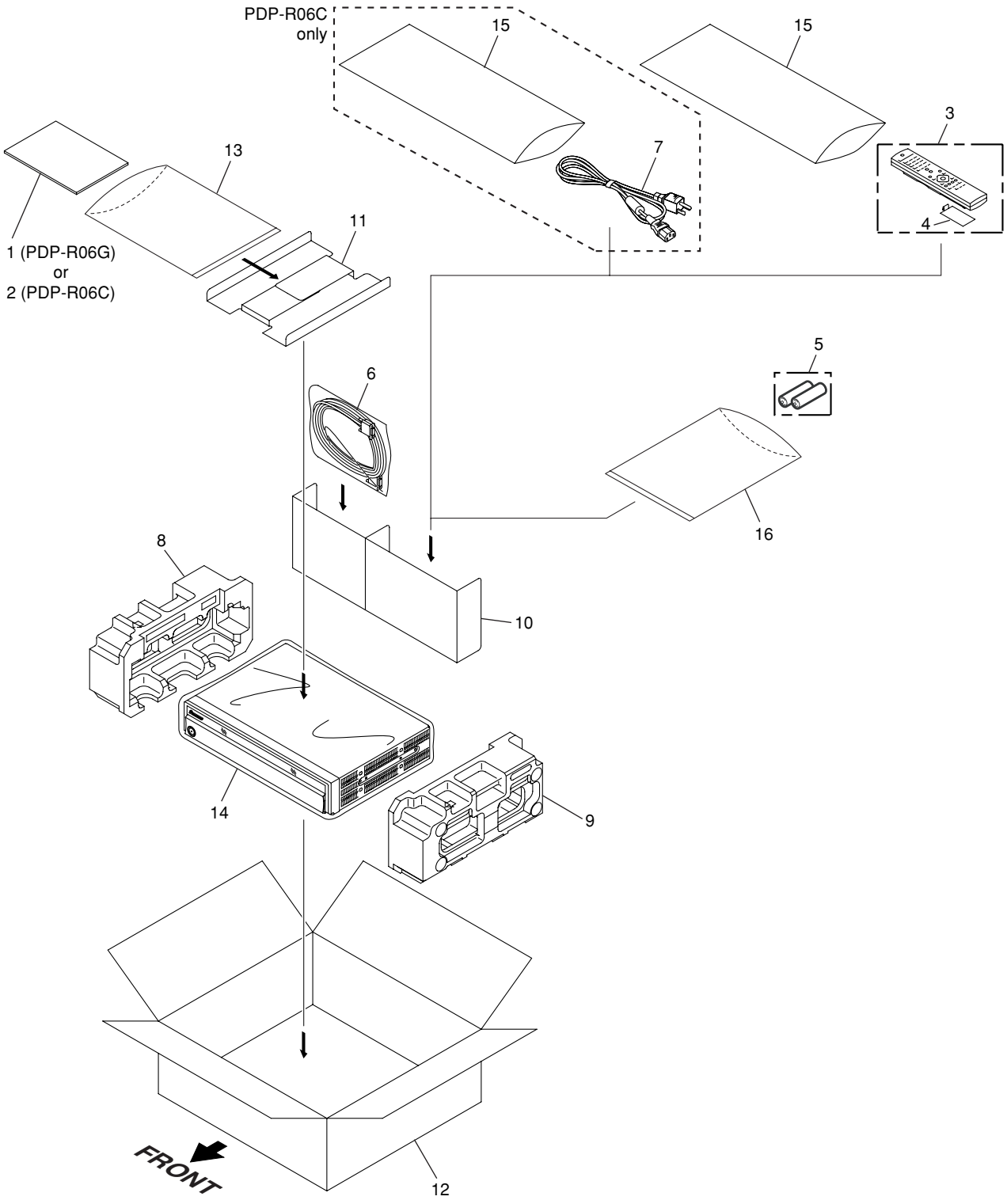


Operating instructions

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING SECTION



(1) PACKING SECTION PARTS LIST

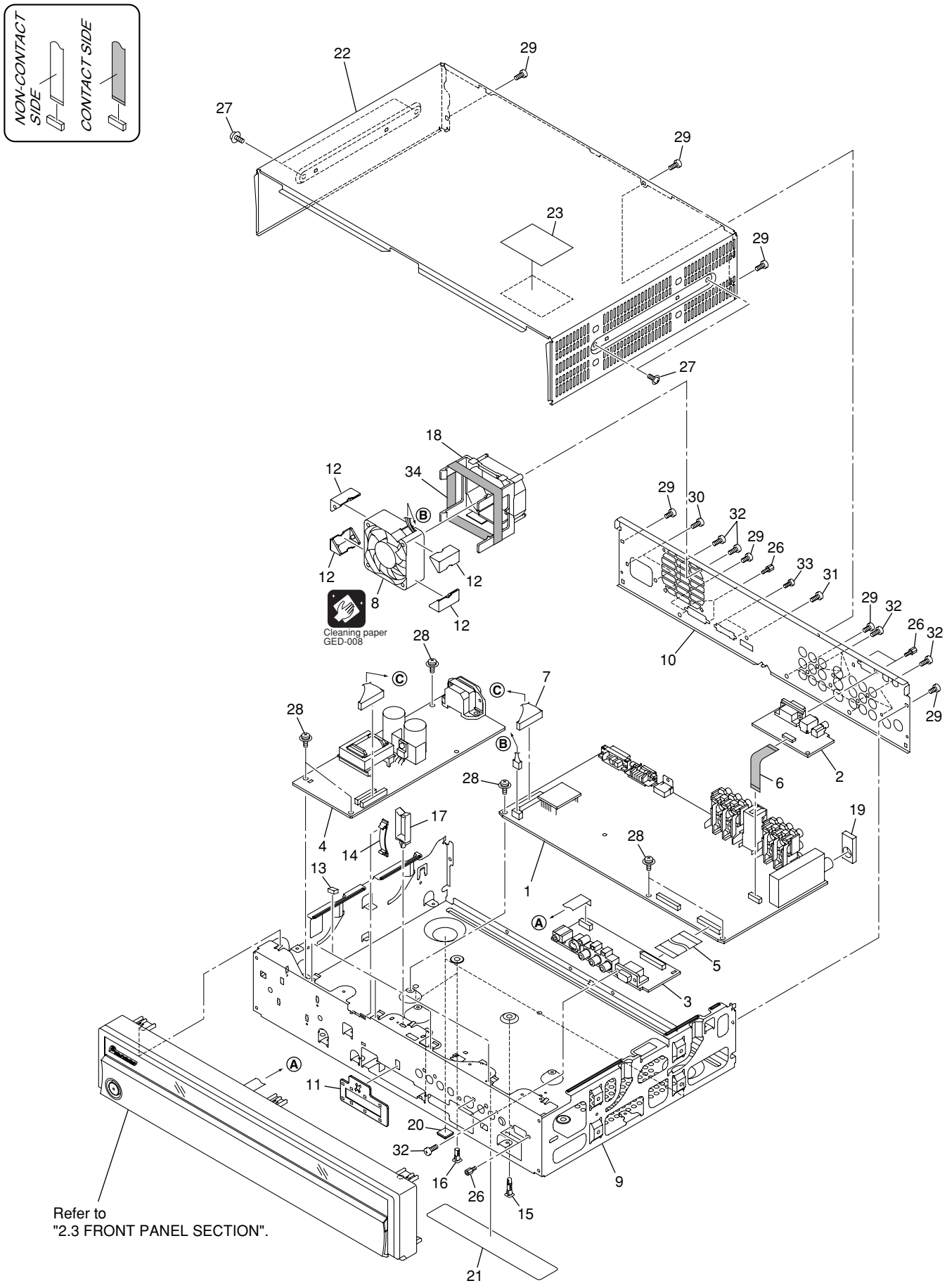
Mark	No.	Description	Part No.
	1	Operating Instructions (English, Chinese, Spanish, Portuguese)	See Contrast table (2)
	2	Operating Instructions (Chinese)	See Contrast table (2)
	3	Remote Control Unit	See Contrast table (2)
	4	Battery Cover	AZA7424
NSP	5	Dry Cell Battery (R6P, AA)	See Contrast table (2)
	6	System Cable (3m)	ADF1027
⚠	7	Power Cord	See Contrast table (2)
	8	Pad L	See Contrast table (2)
	9	Pad R	See Contrast table (2)
	10	Accessory Carton	See Contrast table (2)
	11	Manual Case	See Contrast table (2)
	12	Carton	See Contrast table (2)
NSP	13	Catalogue Bag	See Contrast table (2)
	14	Laminate Sheet	AHG1350
	15	Air Cap Bag	See Contrast table (2)
NSP	16	Catalogue Bag	See Contrast table (2)

(2) CONTRAST TABLE

PDP-R06G/TLDFXJ and PDP-R06C/WAXU5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-R06G/TLDFXJ	PDP-R06C/WAXU5
	1	Operating Instructions (English, Chinese, Spanish, Portuguese)	ARE1398	Not used
	2	Operating Instructions (Chinese)	Not used	ARC1545
	3	Remote Control Unit	AXD1510	AXD1511
NSP	5	Dry Cell Battery (R6P, AA)	VEM1031	VEM1010
⚠	7	Power Cord	Not used	ADG1209
	8	Pad L	AHA2447	AHA2449
	9	Pad R	AHA2448	AHA2450
	10	Accessory Carton M	AHD3423	Not used
	10	Accessory Carton C	Not used	AHD3361
	11	Manual Case	AHD3428	AHD3429
	12	Carton G	AHD3449	Not used
	12	Carton C	Not used	AHD3363
NSP	13	Catalogue Bag	AHG1340	AHG1360
	15	Air Cap Bag	AHG1351	AHG1359
NSP	16	Catalogue Bag	AHG1374	AHG1360

2.2 EXTERIOR SECTION



(1) EXTERIOR SECTION PARTS LIST

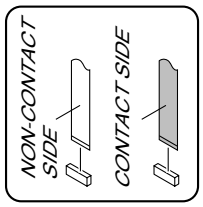
Mark	No.	Description	Part No.
	1	MR MAIN Assy	See Contrast table (2)
	2	SR Assy	AWW1037
	3	FRONT Assy	AWW1051
⚠	4	POWER SUPPLY Unit	AXY1114
	5	Flexible Cable (J201)	See Contrast table (2)
	6	Flexible Cable (J208)	See Contrast table (2)
	7	16P Housing Wire (J101)	See Contrast table (2)
⚠	8	Fan Motor (60 x 25L)	AXM1045
	9	Base Chassis	See Contrast table (2)
	10	Terminal Panel	See Contrast table (2)
⚠	11	Shield Plate	ANG2838
	12	Floating Rubber 60	AEB1410
	13	Front Panel Spacer	AEB1429
	14	Flat Clamp	AEC1858
	15	Circuit Board Spacer	AEC1969
	16	Circuit Board Spacer	AEC2028
	17	Re-used Wire Saddle	AEC2038
	18	Fan Holder 60	AMR3451
⚠	19	Gasket M	ANK1774
	20	Rubber Foot	VEB1349
	21	Bottom Cover	See Contrast table (2)
	22	Metal Bonnet	See Contrast table (2)
	23	Caution Label (C)	See Contrast table (2)
	24	• • • • •	
	25	• • • • •	
	26	Hex Head Screw	BBA1051
	27	Screw	ABZ30P060FTC
	28	Screw	BBB30P080FTC
	29	Screw	BBZ30P060FTB
	30	Screw	BBZ30P100FTC
	31	Screw	BMZ30P060FTC
	32	Screw	BPZ30P080FTB
	33	Screw	PMZ26P060FTB
	34	TERAOKA No.570F 16mm(W)	GYH1001

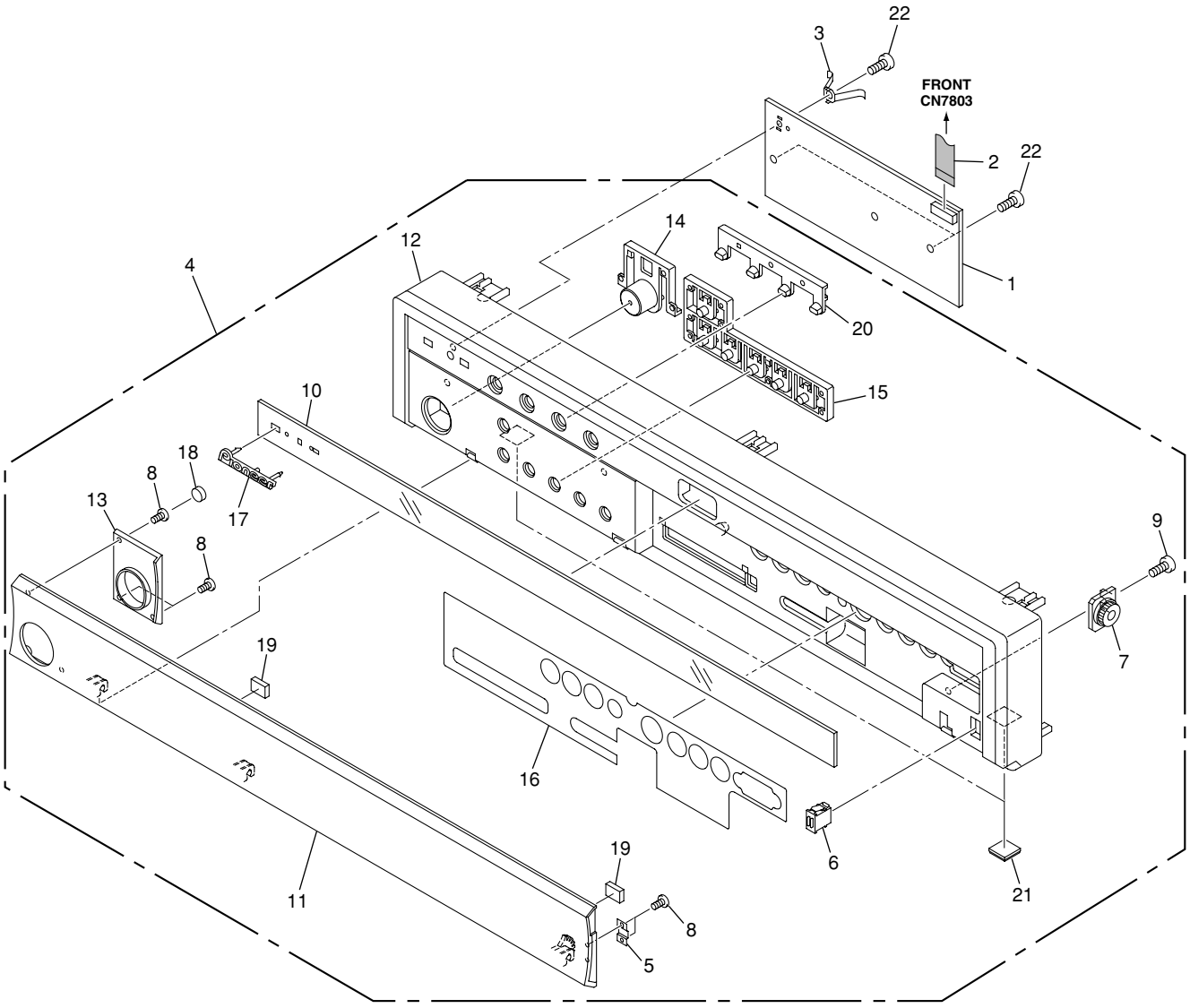
(2) CONTRAST TABLE

PDP-R06G/TLDFXJ and PDP-R06C/WAXU5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-R06G/TLDFXJ	PDP-R06C/WAXU5
	1	MR MAIN Assy	AWV2232	AWV2234
	5	Flexible Cable (J201)	ADD1311	ADD1318
	6	Flexible Cable (J208)	ADD1328	ADD1320
	7	16P Housing Wire (J101)	ADX3140	ADX3147
	9	Base Chassis	ANA1872	Not used
	9	Base Chassis (J)	Not used	ANA1891
	10	Terminal Panel G	ANC2379	Not used
	10	Terminal Panel C	Not used	ANC2380
	21	Bottom Cover (G)	AAX3221	Not used
	21	Bottom Cover (C)	Not used	AAX3222
	22	Metal Bonnet	ANE1653	ANE1644
	23	Caution Label (C)	Not used	AAX3220

2.3 FRONT PANEL SECTION





(1) FRONT PANEL SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	LED Assy	AWW1043
	2	Flexible Cable (J207)	See Contrast table (2)
⚠	3	Earth Metal	BNG1336
	4	Front Panel Assy	See Contrast table (2)
	5	Magnet Catcher	ANG2820
	6	Magnet Holder Assy	AEC1077
	7	Gear Damper	AXA1019
	8	Screw (2 x 3.5)	ABA1329
	9	Screw	BPZ30P080FTB
	10	Indicator Panel	See Contrast table (2)
	11	Door (GC)	AAN1486
	12	Front Panel	AMB2863
	13	Escutcheon Ring	AAD4134
NSP	14	Power Button	AAD4135
NSP	15	Operation Button	AAD4136
	16	Sealing Sheet (G)	AAL2669
	17	Pioneer Name Plate	AAM1107
	18	Door Cushion	AEB1412
	19	Door Cushion S	AEB1425
NSP	20	LED Lens	AMR3452
	21	Rubber Foot	VEB1349
	22	Screw	BPZ30P080FTB

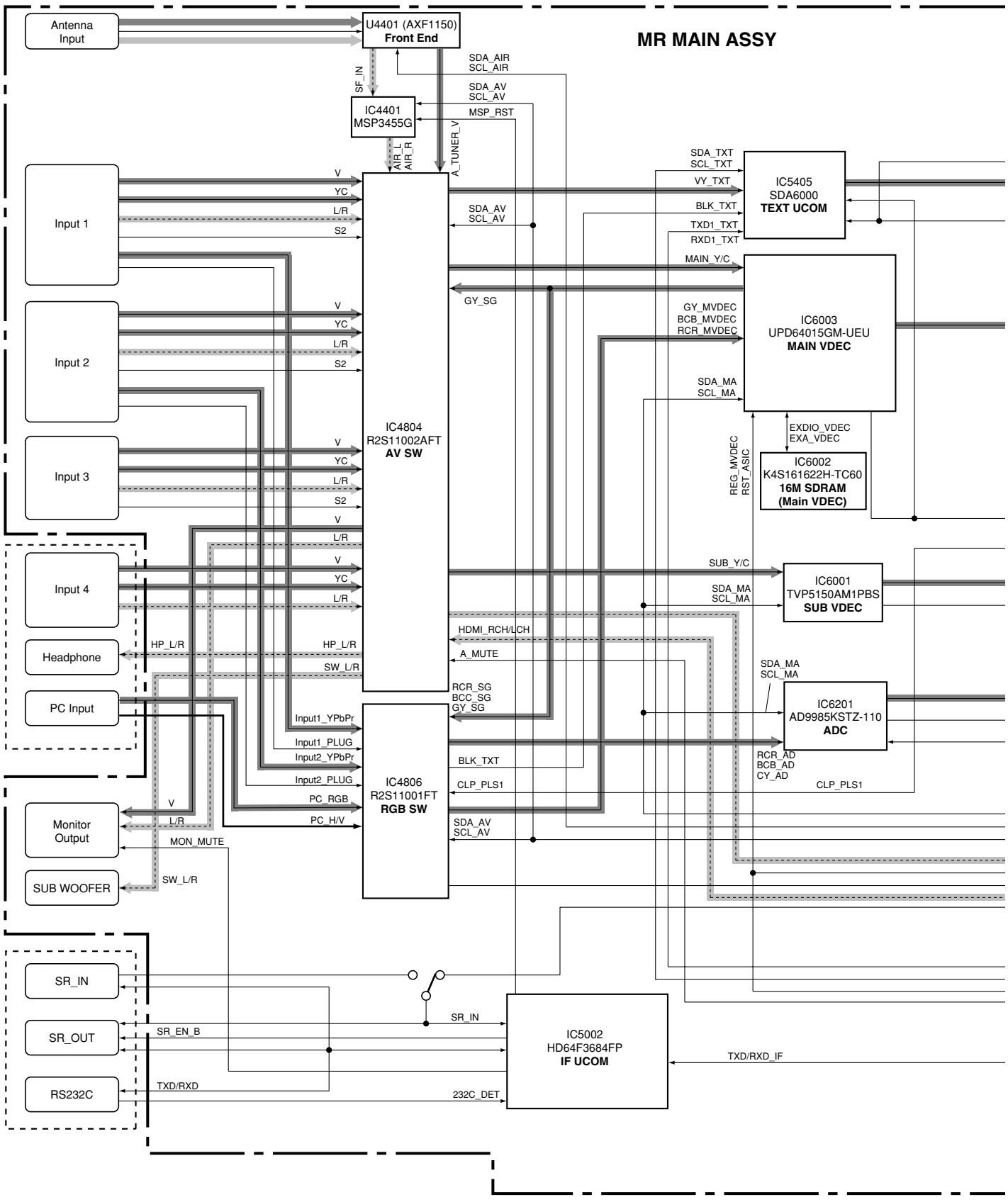
(2) CONTRAST TABLE

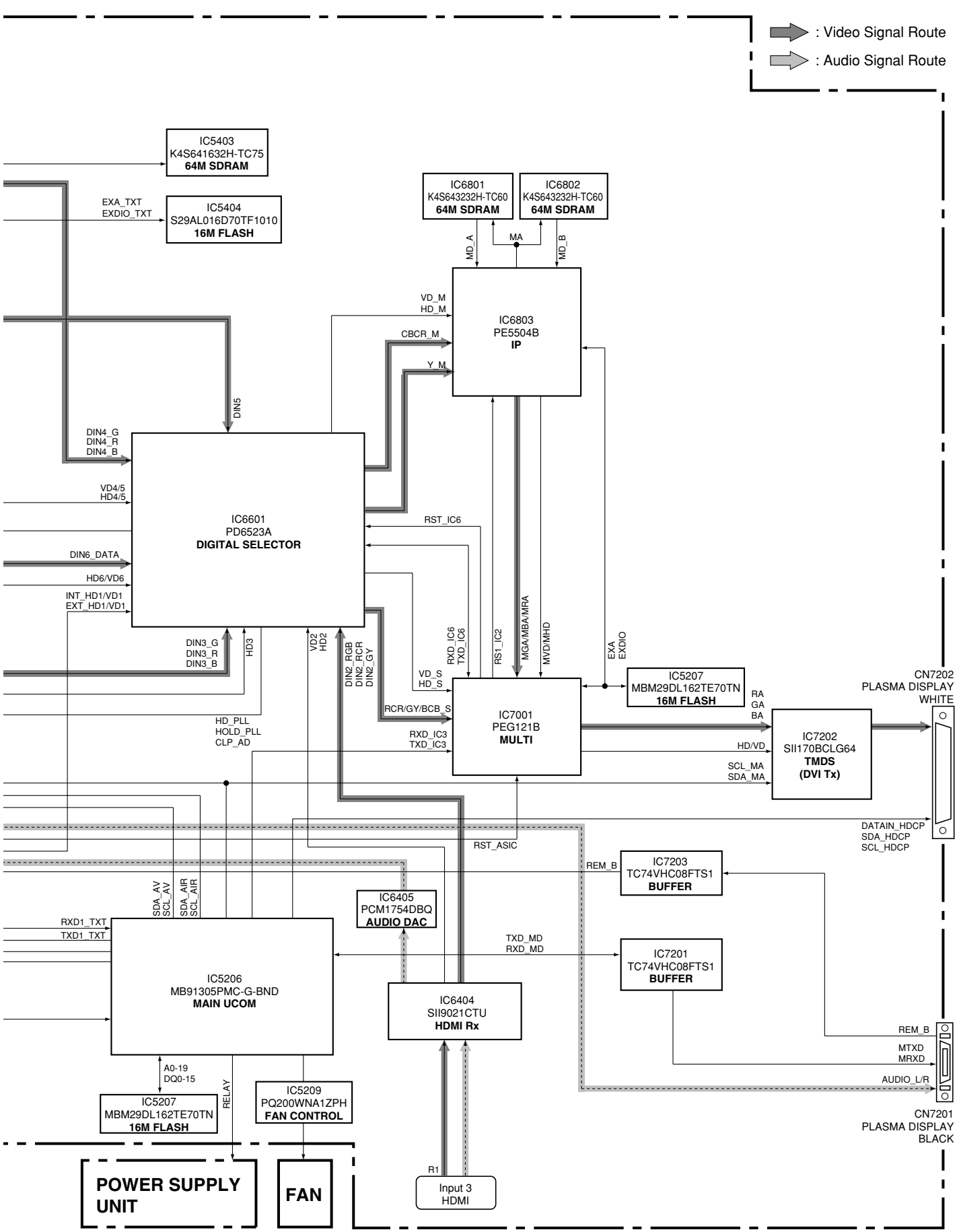
PDP-R06G/TLDFXJ and PDP-R06C/WAXU5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-R06G/TLDFXJ	PDP-R06C/WAXU5
	2	Flexible Cable (J207)	ADD1314	ADD1319
	4	Front Panel Assy G	AXG1032	Not used
	4	Front Panel Assy C	Not used	AXG1033
	10	Indicator Panel (G)	AAK2845	Not used
	10	Indicator Panel (C)	Not used	AAK2846

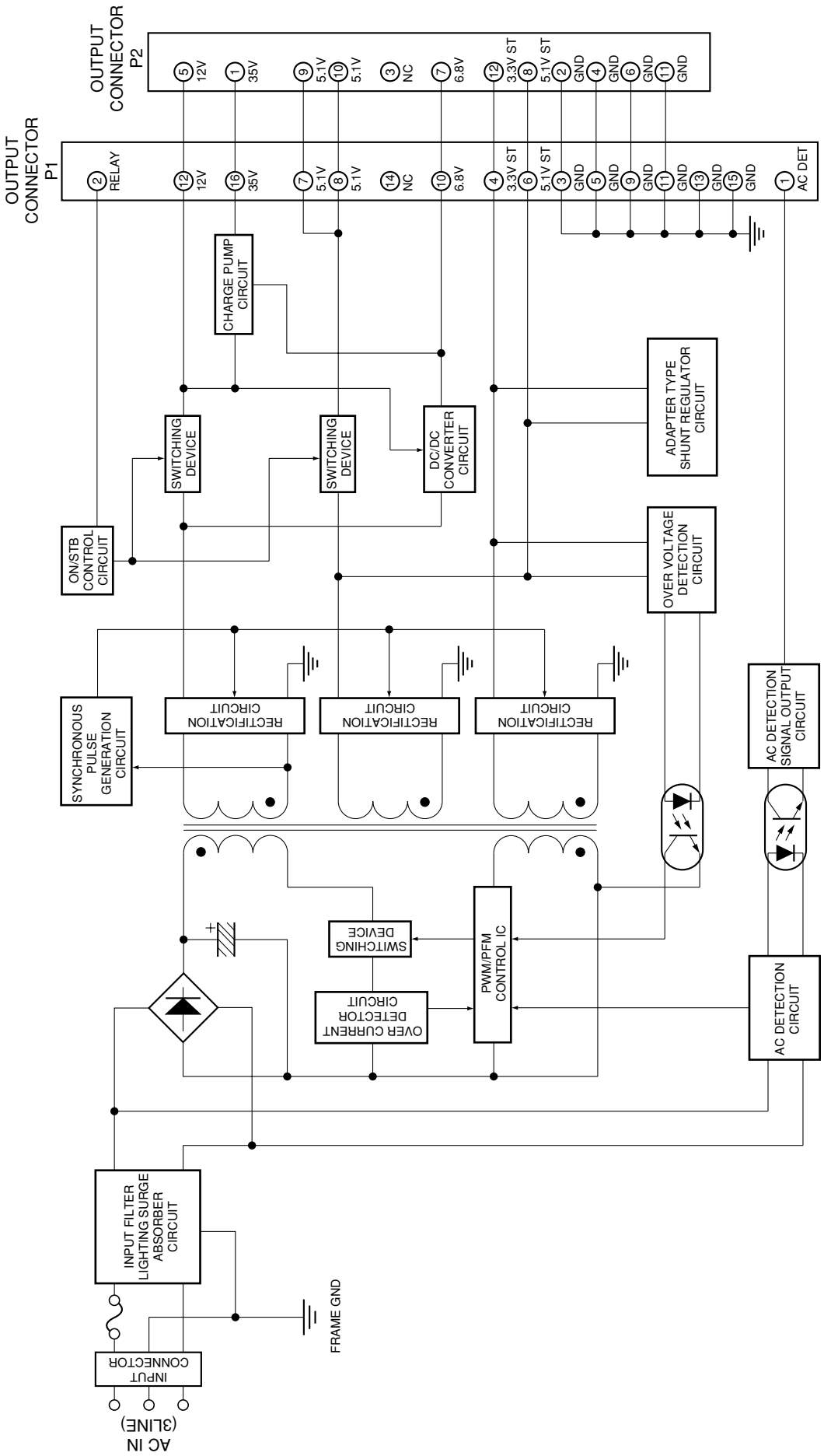
3. BLOCK DIAGRAM

3.1 OVERALL BLOCK DIAGRAM



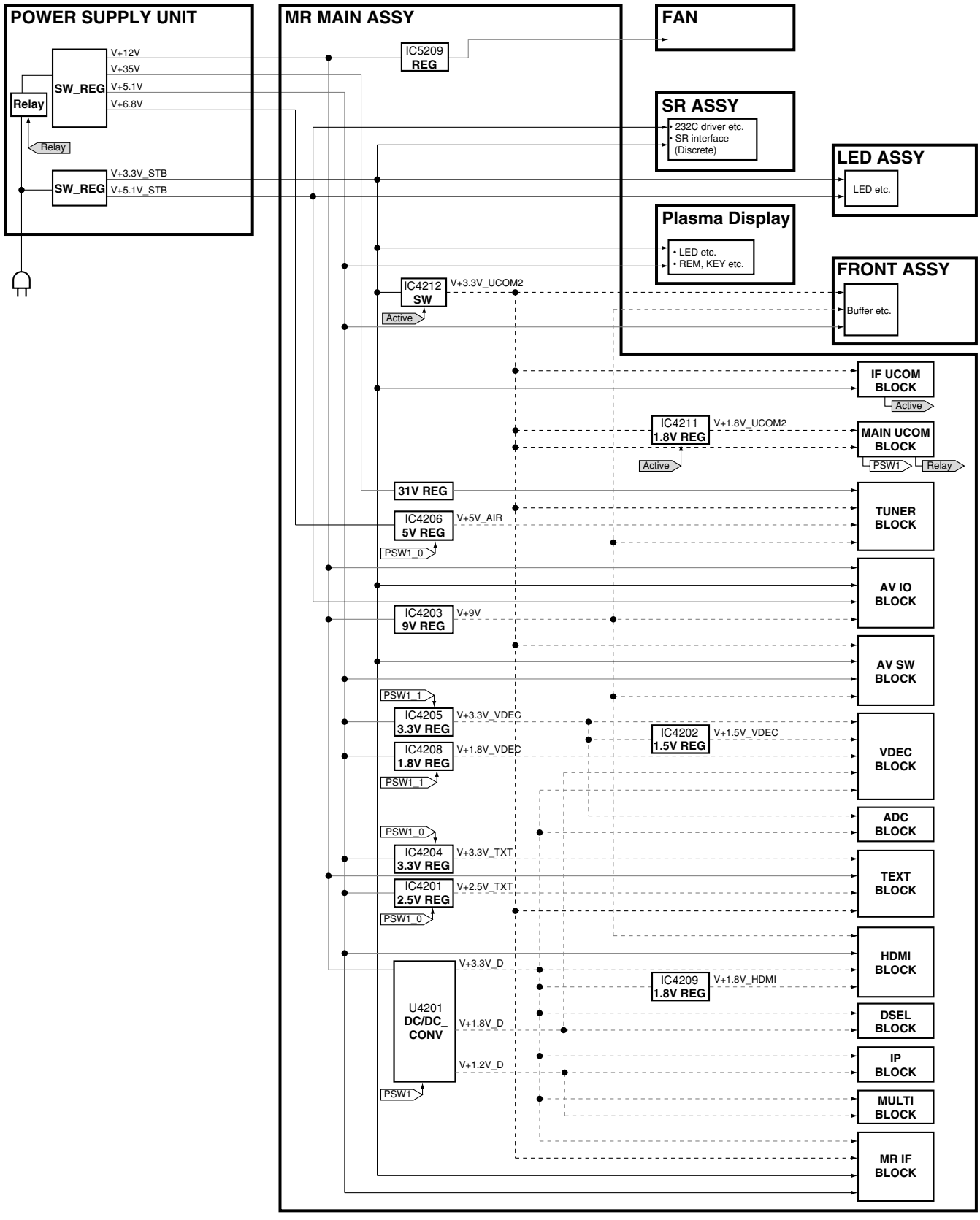

: Video Signal Route
: Audio Signal Route
IC5403
K4S641632H-TC75
64M SDRAM
EXA_TXT
EXDIO_TXT
IC5404
S29AL016D70TF1010
16M FLASH
IC6801
K4S643232H-TC60
64M SDRAM
IC6802
K4S643232H-TC60
64M SDRAM
MD_A
MA
MD_B
VD_M
HD_M
CBCR_M
Y_M
IC6803
PE5504B
IP
DIN5
DIN4_G
DIN4_R
DIN4_B
VD4/5
HD4/5
IC6601
PD6523A
DIGITAL SELECTOR
DIN6_DATA
HD6/VD6
INT_HD1/VD1
EXT_HD1/VD1
RST_IC6
DIN3_G
DIN3_R
DIN3_B
HD3
VD2
HD2
DIN2_RGB
DIN2_RCR
DIN2_GY
RXD_IC6
TXD_IC6
RS1_IC2
MGA/MBA/MRA
MVD/MHD
EXA
EXDIO
VD_S
HD_S
RCR/GY/BCB_S
HD_PLL
HOLD_PLL
CLP_AD
RXD_IC3
TXD_IC3
IC7001
PEG121B
MULTI
IC5207
MBM29DL162TE70TN
16M FLASH
RA
GA
BA
HD/VD
SCL_MA
SDA_MA
IC7202
SII170BCLG64
TMDS
(DVI Tx)
CN7202
PLASMA DISPLAY
WHITE
DATAIN_HDCP
SDA_HDCP
SCL_HDCP
RST_ASIC
REM_B
IC7203
TC74VHC08FTS1
BUFFER
SDA_AV
SCL_AV
SDA_AIR
SCL_AIR
IC6405
PCM1754DBQ
AUDIO DAC
RXD1_TXT
TXD1_TXT
IC5206
MB91305PMC-G-BND
MAIN UCOM
TXD_MD
RXD_MD
IC7201
TC74VHC08FTS1
BUFFER
IC6404
SII9021CTU
HDMI Rx
REM_B
MTXD
MRXD
AUDIO_L/R
CN7201
PLASMA DISPLAY
BLACK
A0-19
DQ0-15
IC5207
MBM29DL162TE70TN
16M FLASH
RELAY
IC5209
PQ200WNA1ZPH
FAN CONTROL
R1
Input 3
HDMI
POWER SUPPLY
UNIT
FAN

3.2 POWER SUPPLY UNIT



POWER SUPPLY UNIT

3.3 POWER SUPPLY SIGNAL ROUTE



3.4 VOLTAGES

FRONT ASSY — **MR MAIN ASSY**

CN7004 (AKM1236)		Voltage (V)	CN4001 (AKM1236)	
No.	Name		Name	No.
1	V+3_3V_STB	3.4	V+3_3V_STB	50
2	LED_ON	0	LED_ON	49
3	LED_OFF	3.4	LED_OFF	48
4	GND[LED_MDM]	0	GND[LED_MDM]	47
5	V+5_1V_STB	5.1	V+5_1V_STB	46
6	GND[LED_FCT]	0	GND[LED_FCT]	45
7	KEY_AD1	3.4	KEY_AD1	44
8	KEY_AD2	3.4	KEY_AD2	43
9	GND	0	GND	42
10	GND[LED_HDD1]	0	GND[LED_HDD1]	41
11	GND[LED_HDD2]	0	GND[LED_HDD2]	40
12	GND[LED_HDD3]	0	GND[LED_HDD3]	39
13	PC_V	0	PC_V	38
14	GND	0	GND	37
15	PC_H	0	PC_H	36
16	GND	0	GND	35
17	PC_G	2.5	PC_G	34
18	GND	0	GND	33
19	PC_B	2.5	PC_B	32
20	GND	0	GND	31
21	PC_R	2.5	PC_R	30
22	GND	0	GND	29
23	GND	0	GND	28
24	HP_PLUG	0	HP_PLUG	27
25	NC	0	NC	26
26	GND	0	GND	25
27	GND	0	GND	24
28	HP_R	2.1	HP_R	23
29	GND	0	GND	22
30	GND	0	GND	21
31	HP_L	2.1	HP_L	20
32	GND	0	GND	19
33	GND	0	GND	18
34	INPUT4_Y	2.5	INPUT4_Y	17
35	GND	0	GND	16
36	INPUT4_C	2.2	INPUT4_C	15
37	GND	0	GND	14
38	INPUT4_SPLUG	5.0	INPUT4_SPLUG	13
39	INPUT4_S2	0	INPUT4_S2	12
40	GND	0	GND	11
41	INPUT4_V	2.5	INPUT4_V	10
42	GND	0	GND	9
43	INPUT4_L	4.5	INPUT4_L	8
44	GND	0	GND	7
45	INPUT4_R	4.5	INPUT4_R	6
46	GND	0	GND	5
47	WE_RDM	0	WE_RDM	4
48	V+3_3V_UCOM	3.4	V+3_3V_UCOM	3
49	V+5V_A	5.1	V+5V_A	2
50	V+9V_A	9.0	V+9V_A	1

FRONT ASSY — **LED ASSY**

CN7804 (AKM1238)		Voltage (V)	CN8001 (CKS3826)	
No.	Name		Name	No.
1	GND	0	GND	12
2	GND	0	GND	11
3	GND	0	GND	10
4	GND	0	GND	9
5	KEY_AD2	3.4	KEY_AD2	8
6	KEY_AD1	3.4	KEY_AD1	7
7	LED_TREC	0	LED_TREC	6
8	V+5_V_STB	5.1	V+5_V_STB	5
9	GND	0	GND	4
10	LED_OFF	3.4	LED_OFF	3
11	LED_ON	0	LED_ON	2
12	V+3_3V_STB	3.4	V+3_3V_STB	1

FAN — **MR MAIN ASSY**

		Voltage (V)	CN4009 (AKM1274)	
No.	Name		Name	No.
–	–	6.5	FAN_VCC	1
–	–	0	FAN_NG1	2
–	–	0	GND	3

SR ASSY — **MR MAIN ASSY**

CN7601 (CKS3826)		Voltage (V)	CN4008 (AKM1233)	
No.	Name		Name	No.
12	V+5_1_STB	5.1	V+5_1_STB	1
11	V+3_3_STB	3.4	V+3_3_STB	2
10	TXD	3.4	TXD	3
9	RXD	3.4	RXD	4
8	232C_DET	0	232C_DET	5
7	SR_EN_B	3.4	SR_EN_B	6
6	GND	0	GND	7
5	REM_B	3.4	REM_B	8
4	SR_IN	3.4	SR_IN	9
3	GND	0	GND	10
2	NC	-	NC	11
1	GND	0	GND	12

POWER SUPPLY UNIT — **MR MAIN ASSY**

CN101 (B16B-PH-K-S)		Voltage (V)	CN4006 (KM200NA16)	
No.	Name		Name	No.
16	V+35V	35.8	V+35V	16
15	GND	0	GND	15
14	V+17V	0	V+17V	14
13	GND	0	GND	13
12	V+12V	12.2	V+12V	12
11	GND	0	GND	11
10	V+6_8V	6.6	V+6_8V	10
9	GND	0	GND	9
8	V+5_1V	5.1	V+5_1V	8
7	V+5_1V	5.1	V+5_1V	7
6	V+5_1V_STB	5.1	V+5_1V_STB	6
5	GND	0	GND	5
4	V+3_3V_STB	3.4	V+3_3V_STB	4
3	GND	0	GND	3
2	RELAY	3.4	RELAY	2
1	AC_DET	3.4	AC_DET	1

5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 x 10^1 → 561 ····· RD1/4PU 5 6 1 J
47k Ω → 47 x 10^3 → 473 ····· RD1/4PU 4 7 3 J
0.5 Ω → R50 ····· RN2H R 5 0 K
1 Ω → 1R0 ····· RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 x 10^1 → 5621 ····· RN1/4PC 5 6 2 1 F

■ LIST OF HOLE PCB ASSEMBLIES

Mark	Symbol and Description	PDP-R06G/TLDFXJ	PDP-R06C/WAXU5
	1..MR MAIN ASSY	AWV2232	AWV2234
NSP	1..MR FUKUGO ASSY	AWV2233	AWV2233
	2..SR ASSY	AWW1037	AWW1037
	2..FRONT ASSY	AWW1051	AWW1051
	2..LED ASSY	AWW1043	AWW1043
⚠	1..POWER SUPPLY UNIT	AXY1114	AXY1114

MR MAIN ASSY

AWV2232 and AWV2234 are constructed the same except for the following :

Mark	Symbol and Description	AWV2232	AWV2234
	[MAIN UCOM BLOCK]		
	R5243	RS1/16SS103J	Not used
	R5251	Not used	RS1/16SS103J
	R5252	Not used	RS1/10S0R0J
	R5253	RS1/10S0R0J	Not used

■ PCB PARTS LIST FOR PDP-R06G/TLDFXJ UNLESS OTHER WISE NOTED

Mark	No.	Description	Part No.
MR MAIN ASSY			
[BOARD IF BLOCK]			
SEMICONDUCTORS			
	Q4003,Q4004		2SA1586
	Q4001		DTA124EUA
	Q4002		TPC6104
	D4001-D4003,D4005		1SS355
CAPACITORS			
	C4002		CKSRYB105K10
	C4003,C4004		CKSSYB104K10
RESISTORS			
	R4021-R4023		RS1/10S0R0J
	R4007		RS2LMF8R2J
	Other Resistors		RS1/16S###J
OTHERS			
	CN4008	12P FFC CONNECTOR	AKM1233
	CN4001	50P CONNECTOR	AKM1236
	CN4009	CONNECTOR 3P	AKM1274
	CN4006	16P CONNECTOR	KM200NA16

Mark	No.	Description	Part No.
[REG BLOCK]			
SEMICONDUCTORS			
	IC4212		BD6522F
	IC4208,IC4211		MM1661JH
	IC4202		NCP1117ST15
	IC4209		NCP1117ST18
	IC4201		PQ025ENA1ZPH
	IC4204,IC4205		PQ033ENA1ZPH
	IC4206		PQ050DNA1ZPH
	IC4203		PQ090DNA1ZPH
	Q4201		DTC124EUA
	D4201-D4206,D4208,D4209,D4211		1SS355
COILS AND FILTERS			
	L4201	INDUCTOR	BTH1111
⚠	L4203-L4205	CHIP BEAD FILTER	BTX1042
⚠	F4201-F4203,F4205,F4207	EMI FILTER	CCG1162
CAPACITORS			
	C4201,C4206,C4209 (10/6.3V)		ACG7046
	C4215,C4220,C4233 (10/6.3V)		ACG7046
	C4235,C4240 (10/6.3V)		ACG7046
	C4250,C4253 (10/6.3V)		ACG7046
	C4257,C4260,C4263 (10/6.3V)		ACG7046

Mark	No.	Description	Part No.
	C4213	(100/16V)	ACH1394
	C4210,C4244,C4269		ACH1429
	C4273		CCSSCH101J50
	C4205,C4216,C4219,C4221,C4222		CEHVKW101M6R3
	C4224,C4228,C4238,C4264		CEHVKW101M6R3
	C4226		CEHVKW220M16
	C4214		CKSRYB104K16
	C4203,C4217,C4223		CKSRYB105K10
	C4229,C4237,C4252		CKSSYB104K10
	C4232,C4234		CKSSYB471K50
	C4204,C4212,C4227,C4236,C4251		CKSSYF104Z16
	C4261,C4262		CKSSYF104Z16
	C4211,C4225,C4256		DCH1165
	RESISTORS		
	R4221,R4226		RS1/10S0R0J
	Other Resistors		RS1/16S###J
	OTHERS		
	U4201	DD CONTROL UNIT	AXY1117
	[TUNER BLOCK]		
	SEMICONDUCTORS		
	IC4401		MSP3455G
	Q4404		2SA1586
	Q4401,Q4402		2SC4116
	Q4414		DTA124EUA
	Q4413,Q4415		DTC124EUA
	Q4407,Q4408		HN1A01FU
	Q4405		HN1B04FU
	Q4409		HN1C01FU
	D4401		UDZS33(B)
	D4403		UDZS8R2(B)
	COILS AND FILTERS		
	L4401-L4403	CHIP COIL	BTH1119
	L4405,L4406		LCTAW150J2520
	L4407		LCTAW4R7J2520
	L4404		LCTAW8R2J2520
	F4401,F4402	FERRITE BEAD	VTF1080
	CAPACITORS		
	C4404,C4407,C4410	(10/6.3V)	ACG7046
	C4415,C4416	(10/6.3V)	ACG7046
	C4429,C4459	(10/6.3V)	ACG7046
	C4424	(3.3/50V)	ACH1385
	C4449		CCSRCH680J50
	C4442		CCSRCJ3R0C50
	C4417,C4418		CCSSCH100D50
	C4450		CCSSCH121J50
	C4456		CCSSCH181J50
	C4448		CCSSCH470J50
	C4428,C4443		CCSSCH560J50
	C4441		CCSSCH5R0D50
	C4409,C4423		CEHVKW100M16
	C4422		CEHVKW470M16
	C4420		CKSRYB332K50
	C4401,C4413		CKSRYF104Z50
	C4403,C4421,C4427,C4430,C4440		CKSSYB102K50
	C4444,C4455,C4461		CKSSYB102K50
	C4408,C4439,C4446		CKSSYB103K16
	C4438,C4454		CKSSYB472K25

Mark	No.	Description	Part No.
	C4402,C4405,C4406,C4425,C4426		CKSSYF104Z16
	C4434,C4435,C4447,C4451,C4460		CKSSYF104Z16
	C4465		CKSSYF104Z16
	C4414,C4437,C4445		DCH1165
	RESISTORS		
	All Resistors		RS1/16S###J
	OTHERS		
	X4401	CRYSTAL (18.432MHz)	ASS1196
⚠	U4401	FRONT END (IBD)	AXF1150
	[AV IO BLOCK]		
	SEMICONDUCTORS		
	Q4614,Q4626,Q4639		2SA1586
	Q4618,Q4622-Q4624,Q4637		2SC4116
	Q4619,Q4620,Q4640		2SD2114K
	Q4616,Q4621,Q4627		DTA124EUA
	Q4617,Q4628		DTC124EUA
	Q4625,Q4638		HN1A01FU
	D4611,D4612,D4615		1SS301
	D4606		1SS355
	COILS AND FILTERS		
	L4601-L4606		LCTAW1R0J2520
	L4607,L4608		LCTAW560J2520
	CAPACITORS		
	C4621	(10/6.3V)	ACG7046
	C4657	(100/16V)	ACH1394
	C4623		ACH1419
	C4658		CCG1205
	C4643		CKSRYB104K16
	C4603,C4608,C4613,C4631-C4639		CKSRYB105K10
	C4641,C4642,C4645-C4648		CKSRYB105K10
	C4644		CKSRYB224K10
⚠	C4651-C4656		CKSSYB102K50
	C4601,C4604-C4606,C4609-C4611		CKSSYB103K16
	C4614,C4615,C4649,C4650		CKSSYB103K16
	C4602,C4607,C4612		CKSSYB473K16
	C4622		CKSSYF104Z16
	C4620,C4624,C4625,C4628		DCH1165
	RESISTORS		
	R4670		RS1/10S121J
	R4658		RS1/10S151J
	R4602,R4603,R4605,R4606		RS1/16S75R0F
	R4608-R4612,R4619-R4622		RS1/16S75R0F
	R4625,R4626		RS1/16S75R0F
	Other Resistors		RS1/16S###J
	OTHERS		
	JA4603	9P PIN JACK	AKB1319
	JA4602	9P PIN JACK	AKB1330
	JA4601	4P MINI DIN (S)	AKP1280
	JA4604	1P JACK	VKB1159
	[AV SW BLOCK]		
	SEMICONDUCTORS		
	IC4807		BH3544F
	IC4805		NJM12904V
	IC4806		R2S11001FT
	IC4804		R2S11002AFT
	IC4809		TC7WH123FU

Mark No.	Description	Part No.
Q4801,Q4802,Q4809,Q4818,Q4820		2SA1586
Q4808,Q4811-Q4813,Q4821		2SC4116
Q4814		DTA124EUA
Q4815		DTC124EUA
D4802,D4806		1SS301
CAPACITORS		
C4916 (4.7/10V)		ACG1122
C4821,C4835,C4871 (10/6.3V)		ACG7046
C4875,C4896,C4923 (10/6.3V)		ACG7046
C4877,C4880		CCSRCH181J50
C4859		CCSRCH331J50
C4861		CCSRCH680J50
C4885,C4888		CCSRCH681J50
C4822,C4862		CEHVKW101M6R3
C4898		CEHVKW470M6R3
C4802,C4805,C4806,C4808		CKSRYB105K10
C4813,C4814,C4820,C4833,C4834		CKSRYB105K10
C4836,C4838-C4841,C4847,C4848		CKSRYB105K10
C4850,C4851,C4878,C4879,C4889		CKSRYB105K10
C4894,C4895,C4922		CKSRYB105K10
C4853-C4858,C4860,C4865		CKSSYB103K16
C4869,C4870,C4890-C4893		CKSSYB103K16
C4807,C4809		CKSSYB104K10
C4801,C4819,C4845,C4846,C4864		CKSSYF104Z16
C4867,C4868,C4873,C4874		CKSSYF104Z16
C4881-C4884,C4886,C4887		CKSSYF104Z16
C4899-C4901,C4917,C4921,C4925		CKSSYF104Z16
C4844,C4863,C4866,C4872,C4876		DCH1165
RESISTORS		
R4975,R4999		RD1/2LMF120J
R4784,R4786		RS1/16S1800F
R4785,R4787		RS1/16S5600F
Other Resistors		RS1/16S###J
[IF UCOM BLOCK]		
SEMICONDUCTORS		
IC5002		HD64F3684FP
IC5003		PST9230N
IC5001		TC74VHC08FTS1
IC5004		TC7W126FU
Q5001		DTC124EUA
CAPACITORS		
C5007,C5008		CCSSCH180J50
C5001		CEHVKW101M6R3
C5010		CKSSYB472K25
C5002-C5005,C5009,C5012		CKSSYF104Z16
RESISTORS		
R5002,R5007,R5025-R5027		RAB4CQ103J
Other Resistors		RS1/16S###J
OTHERS		
X5002 CERAMIC RESONATOR		ASS1168
X5001 CRYSTAL OSCILLATOR		ASS1172

Mark No.	Description	Part No.
[MAIN UCOM BLOCK]		
SEMICONDUCTORS		
IC5202		BR24L64F-W
IC5206		MB91305PMC-G-BND
IC5207		MBM29DL162TE70TN
IC5210		MM1522XU
IC5209		PQ200WNA1ZPH
IC5203		PST3628UR
IC5201		TC74VHC125FTS1
Q5202		2SJ461A
Q5204		DTC124EUA
Q5201		SM6K2
D5203		1SS355
D5201		SML-311UT
CAPACITORS		
C5235		CCSRCH221J50
C5244,C5245		CCSSCH120J50
C5217,C5218,C5237,C5239-C5243		CCSSCH470J50
C5246-C5249		CCSSCH470J50
C5238		CEHVKW100M35
C5201		CEHVKW101M6R3
C5261-C5263		CKSSYB102K50
C5216,C5233		CKSSYB103K16
C5215		CKSSYB472K25
C5253		CKSSYF103Z50
C5202-C5209,C5211-C5214,C5219		CKSSYF104Z16
C5222-C5232,C5234,C5252		CKSSYF104Z16
C5236		DCH1165
RESISTORS		
R5262,R5268		ACN1248
R5205,R5213		RAB4CQ101J
R5253		RS1/10S0R0J
R5283		RS1/16S1001F
R5282		RS1/16S4701F
R5273		RS1/16S8201F
Other Resistors		RS1/16S###J
OTHERS		
CN5202 50P CONNECTOR		AKM1201
K5201,K5202 TEST PIN		AKX9002
X5201 CERAMIC RESONATOR		ASS1178
[TEXT UCOM BLOCK]		
SEMICONDUCTORS		
IC5403		K4S641632H-TC75
IC5404		S29AL016D70TFI010
IC5405		SDA6000
IC5407		TC74LCX125FT
IC5402		TC7SH04FUS1
IC5406		TC7W126FU
Q5401,Q5406		DTA124EUA
Q5403,Q5407		DTC124EUA
D5404		1SS355
D5401		UDZS12(B)
D5402		UDZS3R0(B)
D5403		UDZS3R9(B)
COILS AND FILTERS		
⚠F5402,F5403 EMI FILTER		CCG1162

Mark No.	Description	Part No.
	CAPACITORS	
	C5412,C5438,C5453 (10/6.3V)	ACG7046
	C5422,C5423	CCSSCH200J50
A	C5404	CKSSYB102K50
	C5403	CKSSYB103K16
	C5445	CKSSYB104K10
	C5405,C5406,C5408,C5410,C5413	CKSSYF104Z16
	C5416,C5418,C5420,C5425,C5427	CKSSYF104Z16
	C5429-C5431,C5434,C5435,C5440	CKSSYF104Z16
	C5442,C5446,C5449,C5451,C5454	CKSSYF104Z16
	C5456,C5458,C5460,C5476	CKSSYF104Z16
	RESISTORS	
	R5409	ACN1251
B	R5404,R5428,R5429,R5434,R5435	BCN1067
	R5439,R5457,R5476	RAB4CQ103J
	R5432,R5460	RAB4CQ680J
	Other Resistors	RS1/16S###J
	OTHERS	
	X5401 CRYSTAL	ASS1193
	[VDEC BLOCK]	
	SEMICONDUCTORS	
	IC6002	K4S161622H-TC60
	IC6001	TVP5150AM1PBS
C	IC6003	UPD64015GM-UEU
	Q6002	DTA124EUA
	COILS AND FILTERS	
	⚠F6001,F6002,F6008-F6011,F6022 EMI FILTER	CCG1162
	CAPACITORS	
	C6056,C6088 (10/6.3V)	ACG7046
	C6059,C6060	CCSSCH100D50
	C6078,C6083	CCSSCH8R0D50
	C6048-C6050	CKSRYB105K10
D	C6062,C6069	CKSSYB103K16
	C6046,C6051,C6052,C6054,C6058	CKSSYB104K10
	C6063,C6064,C6066,C6067	CKSSYB104K10
	C6072,C6073,C6075-C6077	CKSSYB104K10
	C6081,C6082,C6084,C6085	CKSSYB104K10
	C6001-C6008,C6012-C6028	CKSSYF104Z16
	C6031-C6045,C6047,C6053,C6055	CKSSYF104Z16
	C6061,C6065,C6068,C6070,C6071	CKSSYF104Z16
	C6074,C6079,C6080,C6090,C6091	CKSSYF104Z16
	RESISTORS	
E	R6010,R6062,R6068,R6072	ACN1246
	R6065,R6073	BCN1067
	R6007,R6023,R6030,R6071	RAB4CQ220J
	R6063	RS1/16SS1001D
	R6038,R6039,R6049	RS1/16SS2000F
	R6054	RS1/16SS2201D
	R6052	RS1/16SS6200D
	Other Resistors	RS1/16S###J
	OTHERS	
	X6001 CRYSTAL	ASS1189
	X6002 CRYSTAL	ASS1191
F		

Mark No.	Description	Part No.
	[ADC BLOCK]	
	SEMICONDUCTORS	
	IC6201	AD9985KSTZ-110
	COILS AND FILTERS	
	⚠F6201,F6204 EMI FILTER	CCG1162
	CAPACITORS	
	C6205,C6209	CKSSYB104K10
	C6207,C6210,C6218	CKSSYB473K16
	C6202	CKSSYB822K16
	C6201	CKSSYB823K10
	C6203,C6204,C6206,C6208	CKSSYF104Z16
	C6211,C6212,C6215-C6217	CKSSYF104Z16
	C6222-C6224	CKSSYF104Z16
	RESISTORS	
	R6213,R6218,R6223	BCN1067
	R6202	RS1/16SS2701F
	Other Resistors	RS1/16S###J
	[HDMI BLOCK]	
	SEMICONDUCTORS	
	IC6403	BR24L02FJ-W
	IC6405	PCM1754DBQ
	IC6404	SII9021CTU
	Q6416	2SA1586
	Q6414	DTA124EUA
	Q6415	DTC124EUA
	Q6405	HN1K02FU
	Q6404	RN1902
	D6408	1SS301
	D6407	UDZS6R8(B)
	COILS AND FILTERS	
	⚠F6401 EMI FILTER	CCG1162
	CAPACITORS	
	C6491 (10/6.3V)	ACG7046
	C6401,C6403,C6405,C6407,C6411	CCSSCH101J50
	C6419,C6426,C6428,C6430,C6432	CCSSCH101J50
	C6434,C6435,C6438,C6440,C6442	CCSSCH101J50
	C6444,C6446,C6448,C6449,C6454	CCSSCH101J50
	C6456,C6459,C6464,C6466,C6468	CCSSCH101J50
	C6470,C6472,C6474,C6476,C6478	CCSSCH101J50
	C6480,C6482	CCSSCH101J50
	C6462,C6463	CCSSCH120J50
	C6484	CEHVKW220M6R3
	C6402,C6404,C6406,C6408,C6410	CKSSYF104Z16
	C6412,C6414,C6416,C6418,C6420	CKSSYF104Z16
	C6422,C6423,C6427,C6429,C6431	CKSSYF104Z16
	C6433,C6436,C6437,C6439,C6441	CKSSYF104Z16
	C6443,C6445,C6447,C6450,C6451	CKSSYF104Z16
	C6455,C6457,C6458,C6460,C6461	CKSSYF104Z16
	C6465,C6467,C6469,C6471,C6473	CKSSYF104Z16
	C6475,C6477,C6479,C6481,C6483	CKSSYF104Z16
	C6490	CKSSYF104Z16
	RESISTORS	
	R6418,R6419,R6421	ACN1251
	R6414	RAB4CQ100J
	R6465	RAB4CQ103J
	R6438	RAB4CQ470J
	R6416	RAB4CQ680J

Mark No.	Description	Part No.
	Other Resistors	RS1/16S###J
OTHERS		
	JA6402 HDMI CONNECTOR	AKP1278
	X6401 CRYSTAL	ASS1192
[DSEL BLOCK]		
SEMICONDUCTORS		
	IC6601	PD6523A
	IC6602	TC74LCX125FT
COILS AND FILTERS		
⚠	F6604 CHIP BEAD FILTER	ATX1058
⚠	F6601-F6603 EMI FILTER	CCG1162
CAPACITORS		
	C6632 (10/6.3V)	ACG7046
	C6604	CCSRCH221J50
	C6631	CKSSYB102K50
	C6601-C6603,C6607-C6610	CKSSYF104Z16
	C6613-C6617,C6619,C6621-C6623	CKSSYF104Z16
	C6625-C6627,C6629,C6630	CKSSYF104Z16
RESISTORS		
	R6603-R6605	ACN1251
	R6611,R6614,R6618	BCN1071
	R6613,R6620	RAB4CQ101J
	Other Resistors	RS1/16S###J
OTHERS		
	X6601 CRYSTAL	ASS1194
[IP BLOCK]		
SEMICONDUCTORS		
	IC6801,IC6802	K4S643232H-TC60
	IC6803	PE5504B
COILS AND FILTERS		
⚠	L6801-L6804 CHIP BEAD FILTER	BTX1042
CAPACITORS		
	C6801 (10/6.3V)	ACG7046
	C6863	CKSSYB102K50
	C6802,C6804,C6807-C6809,C6813	CKSSYF104Z16
	C6815-C6817,C6821,C6824-C6828	CKSSYF104Z16
	C6830,C6831,C6834,C6835	CKSSYF104Z16
	C6839-C6862	CKSSYF104Z16
RESISTORS		
	R6833,R6838	ACN1246
	R6841,R6844-R6847	ACN1251
	R6813,R6814,R6816,R6820,R6821	BCN1067
	R6823,R6825,R6827,R6828	BCN1067
	R6818	BCN1071
	R6832	RAB4CQ101J
	R6817	RAB4CQ470J
	Other Resistors	RS1/16S###J

Mark No.	Description	Part No.
[MULTI BLOCK]		
SEMICONDUCTORS		
	IC7002	MBM29DL162TE70TN
	IC7001	PEG121B
	IC7004	TC74VHC08FTS1
COILS AND FILTERS		
⚠	F7001-F7005 EMI FILTER	CCG1162
CAPACITORS		
	C7052	CKSSYB102K50
	C7006,C7008,C7010-C7017,C7019	CKSSYF104Z16
	C7021,C7023,C7024,C7026-C7029	CKSSYF104Z16
	C7032-C7034,C7036,C7037	CKSSYF104Z16
	C7039-C7042,C7044,C7046-C7048	CKSSYF104Z16
	C7050	CKSSYF104Z16
RESISTORS		
	R7011,R7013,R7024,R7032,R7036	ACN1246
	R7062-R7064	ACN1251
	R7015,R7023	RAB4CQ101J
	R7016,R7018,R7070	RAB4CQ103J
	R7060	RAB4CQ680J
	Other Resistors	RS1/16S###J
[MR IF BLOCK]		
SEMICONDUCTORS		
	IC7202	SII170BCLG64
	IC7201,IC7203	TC74VHC08FTS1
	Q7206	2SA1586
	Q7203,Q7207,Q7210	DTA124EUA
	Q7211	DTC124EUA
	Q7209	HN1C01FU
	Q7201	RN1902
	D7202-D7206	1SS355
COILS AND FILTERS		
⚠	F7204-F7207 EMI FILTER	ATF1209
⚠	L7201 CHIP BEAD FILTER	BTX1042
⚠	F7201-F7203 EMI FILTER	CCG1162
⚠	F7208 EMI FILTER	CCG1162
CAPACITORS		
	C7203,C7207,C7208 (10/6.3V)	ACG7046
	C7226,C7227	CCSSCH100D50
	C7201,C7204,C7211,C7213,C7214	CCSSCH101J50
	C7216,C7217,C7219,C7221,C7222	CCSSCH101J50
	C7223	CKSSYB102K50
	C7209,C7215,C7220,C7225,C7228	CKSSYB471K50
	C7202,C7205,C7206,C7210,C7212	CKSSYF104Z16
	C7218,C7224	CKSSYF104Z16
RESISTORS		
	R7215	RAB4CQ101J
	R7216	RS1/16S5100F
	Other Resistors	RS1/16S###J
OTHERS		
	CN7201 SOCKET (20P)	AKP1226
	CN7202 DVI SOCKET (24P)	AKP1250

Mark	No.	Description	Part No.

SR ASSY

SEMICONDUCTORS

	IC7601	MAX3232CPW
	IC7603	TC74VHC00FTS1
	IC7602	TC74VHC125FTS1
	Q7601,Q7605	2SA1586
	Q7603	2SC4116
	Q7602,Q7604,Q7606	DTC124EUA
	D7609-D7612	1SS355

CAPACITORS

	C7608,C7611	CEHVKW100M16
	C7603-C7607,C7609,C7610	CKSSYF104Z16

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	JA7603 MINI JACK (4P)	AKN1073
	CN7602 9P D-SUB SOCKET	AKP1213
	CN7601 CONNECTOR	CKS3826
	JA7602 JACK	RKN1004

FRONT ASSY

SEMICONDUCTORS

	IC7801	BR24C21FJ
	IC7802	TC74VHC08FTS1
	Q7806-Q7808	2SC4116
	Q7804,Q7805	DTC124EUA
	D7813	1SS301
	D7816-D7818	1SS302
	D7801-D7803	UDZS5R1(B)
	D7809-D7812,D7814,D7815	UDZS5R6(B)
	D7804,D7808	UDZS9R1(B)

COILS AND FILTERS

	L7803,L7804	LCTAW560J2520

CAPACITORS

	C7821,C7827 (10/6.3V)	ACG7046
	C7829,C7830 (10/6.3V)	ACG7046
	C7822,C7823	CCSRCH220J50
	C7817,C7818	CEHAT471M10
	C7803,C7804	CKSRYB103K50
	C7805,C7808,C7809,C7813	CKSRYB105K10
	C7831,C7832,C7834	CKSRYB105K10
	C7801	CKSRYB473K16
⚠	C7839,C7840	CKSSYB102K50
	C7802,C7820,C7824	CKSSYF104Z16
	C7819,C7835	DCH1165

RESISTORS

	R7801,R7803,R7809,R7857-R7859	RS1/16S75R0F
	Other Resistors	RS1/16S###J

OTHERS

	JA7803 PIN JACK (3P)	AKB1303
	CN7803 12P FFC CONNECTOR	AKM1233
	CN7804 50P CONNECTOR	AKM1236
	CN7801 MINI JACK	AKN1028
	CN7806 15P D-SUB SOCKET	AKP1214
	JA7801 4P MINI DIN SOCKET (S)	AKP1238
⚠	7805 SCREW TERMINAL	VNE1949

LED ASSY

SEMICONDUCTORS

	Q8004	DTC124EUA
	Q8002	RN2902
	D8003	SML-311UT
	D8004	SML310BA1T

SWITCHES AND RELAYS

	S8001-S8006	ASG1088

CAPACITORS

	C8005,C8006	CCSRCH101J50
	C8001,C8002	CKSSYF104Z16

RESISTORS

	All Resistors	RS1/16S###J

OTHERS

	CN8001 CONNECTOR	CKS3826

POWER SUPPLY UNIT

POWER SUPPLY Unit has no service part.

6. ADJUSTMENT

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced.
2. Use a stable AC power supply.

6.1 POSSIBLE CASES WHERE READJUSTMENT IS REQUIRED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	No adjustment required
MR MAIN Assy	➡	No adjustment required
Other assemblies	➡	No adjustment required

■ When any part in the following assemblies is replaced

POWER SUPPLY Unit	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
MR MAIN Assy	➡	No adjustment required. However, IC4804, IC4806, IC5207, IC6001, IC6003 and IC6201 must not be replaced. In this case, the assembly must be replaced as a unit.
Other assemblies	➡	No adjustment required

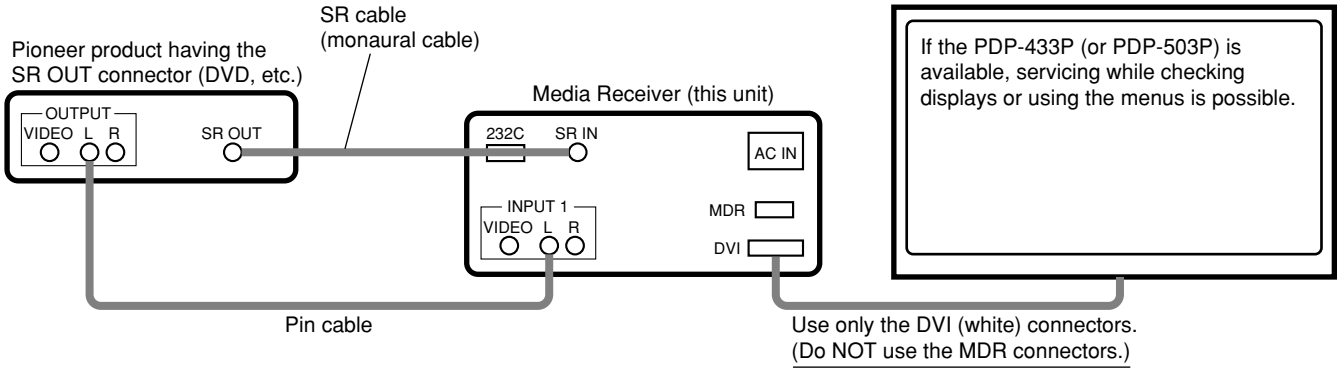
6.2 SERVICING USING ONLY THE MEDIA RECEIVER

For servicing of the PDP-436HD and PDP-506HD-series Plasma Display using only the Media Receiver, the following two methods can be used:

● Remote controlling using SR connections

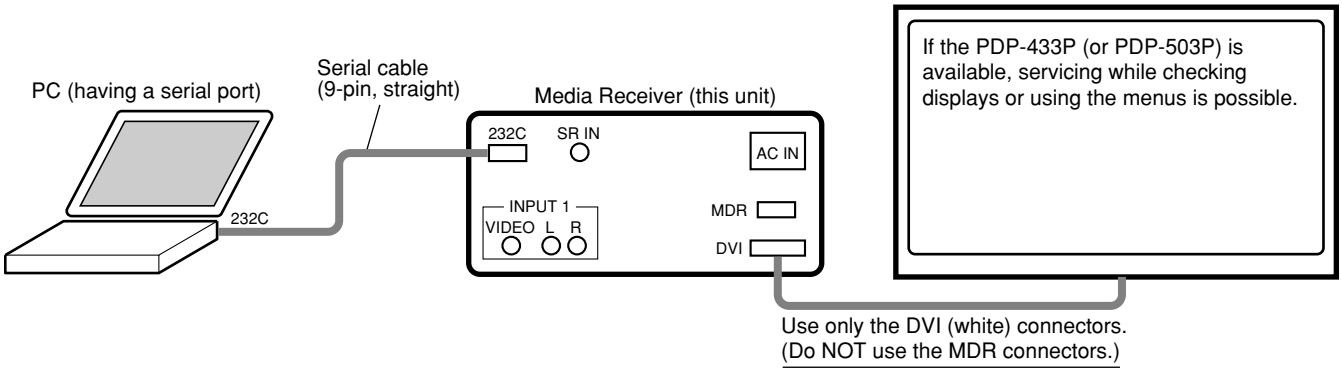
About connections

- Connect the SR OUT connector of a Pioneer product having that connector (a DVD in the following example) and the SR IN connector of the Media Receiver, using the SR cable. As the remote control sensor is not provided with the Media Receiver, this connection is required for using the remote control unit if the panel is not available. In this case, aim the remote control unit at the remote control sensor of the device (DVD in this case).
- Connect either the audio or the video output of the device (DVD in the example) and the corresponding audio or video input of the Media Receiver, using a cable with phono plugs. This connection is required in order to use ground in common with the SR cable, because with the SR cable connection the ground connection for signal reference is not available. In the example, the audio L channel is used, but the audio R channel or video can be used instead.
- If the plasma display for a previous model, such as the PDP-433P or PDP-503P, is available, servicing while checking displays or using the menus is possible. For this, connect only the DVI connectors (white) of the Media Receiver and the plasma display. The MDR connector of the Media Receiver must not be used, even though it has the same shape and number of pins, because signals assigned to the connectors



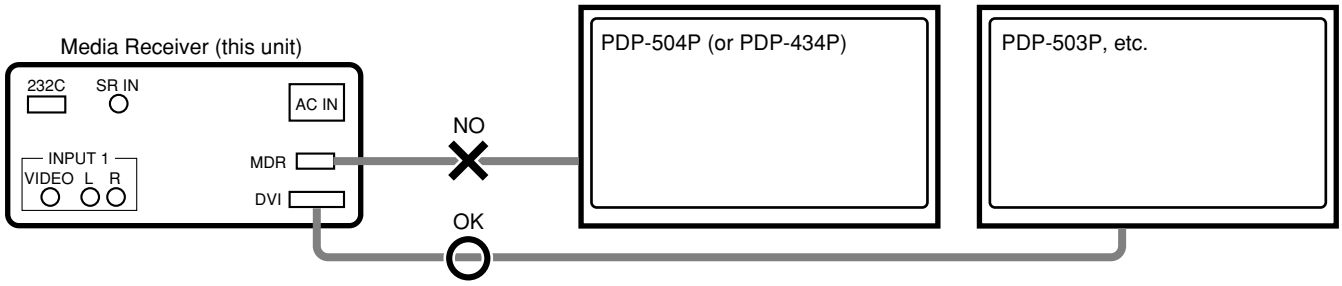
● RS-232C control using a PC

RS-232C control is not available in shipment.
Please set baud rate of PC in 38400bps.
For connection with the PC, use a straight cable.



● Note on connection

If the MDR connector of the PDP-436HD or PDP-506HD-series is used, it is considered that the PDP-436P (or PDP-506P) is connected, and the Media Receiver operates on such precondition, **which may result in a failure of the Media Receiver. Be sure not to connect to the MDR connector.** (Do NOT use the MDR connector when servicing the Media Receiver alone.)



6.3 SERVICE FACTORY MODE

To operate in Service Factory mode, use the supplied remote control unit.

How to enter Service Factory Mode

While in Standby mode, follow the below procedures with the remote control to enter Service Factoy mode.

1. Press the [DISPLAY] key.
2. 3 second counter will start.
3. After 3 seconds, press [LEFT] key.
   (If no operation is done within 10 seconds, the Service Factory routine is cleared, and the standby mode is returned)
4. 5 Second counter will start.
5. Before 5 second counter ends, press [UP] key.
6. Before 5 second counter ends, press [LEFT] key.
7. Before 5 second counter ends, press [RIGHT] key.
8. Before 5 second counter ends, press [POWER] key.
9. If the prodcedure is correct with the given time, the Service Factory mode is up and ready.

* During step 3 to 8, if other operations took place, the Service Factory routine is cleared.

Operation in Service Factory mode

● Functions whose settings are set to OFF

The settings for the following functions are set to OFF when Service Factory mode is entered (including when the "FAY" command is received):

- Two-screen operations (input function set on the main side is selected)
- P ZOOM
- FREEZE
- Detection of the TRAP switch (The log in the EEPROM is retained.) (KUC type only)

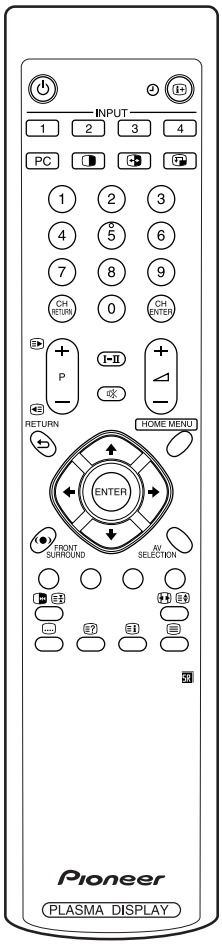
● User data

User data will be treated as follows:

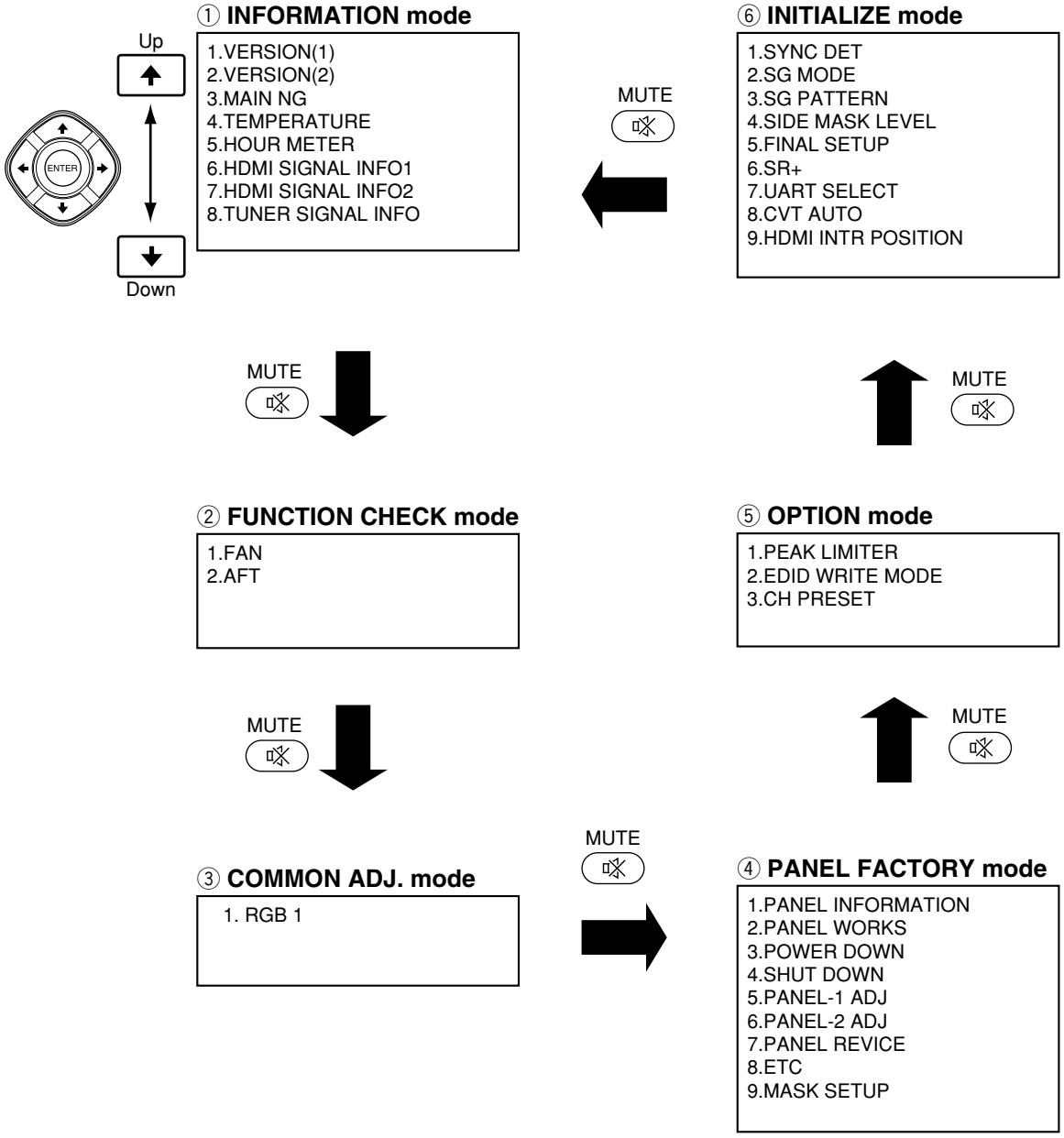
- User data on picture- and audio-quality adjustments are not reflected, and factory-preset data are output (user data will be retained in memory). When the unit enters Factory mode, the current audio-quality adjustment data will still be retained in memory.
- As to data on various settings, user data will be applied to the items that are associated with signal format change (screen size switching, etc.).
- Data on screen (i.e., screen position; meaning clock dividers, and not including data on screen size) are reset to the default values (data stored in memory will be retained). Screen size will be retained.

Remote control codes in Service Factory mode

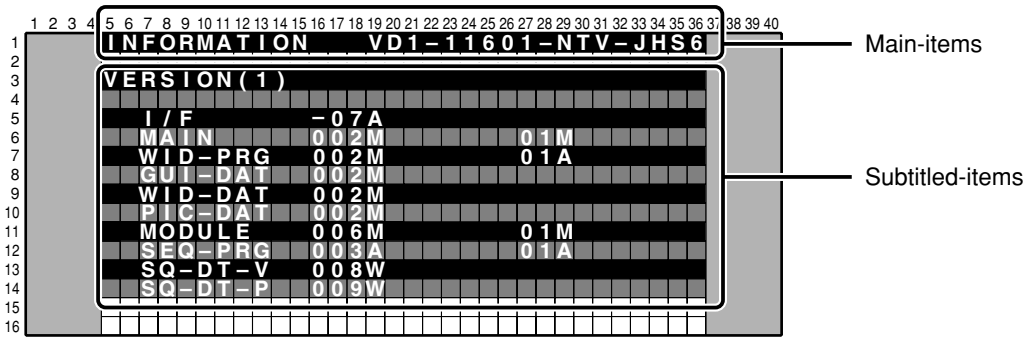
SR Function	Main Function	Remarks
Muting	Switching the main items	Shifting to the next main item (top)
DOWN	Switching the subtitled items	Shifting downward to the next subtitled item
UP	Switching the subtitled items	Shifting upward to the next upper layer
LEFT	Increasing the adjustment value	Increasing the adjustment value
RIGHT	Decreasing the adjustment value	Decreasing the adjustment value
SET	Switching layers	Shifting downward or upward to the next lower or upper layer
INPUT	Selecting input	Shifting the input to the next function
INPUTxx	Selecting input	Switching the input to xx
CH+	Increasing the channel number	Advancing a preset channel (effective when Function is set to TV)
CH-	Decreasing the channel number	Turning a preset channel backward (effective when Function is set to TV)
Numeric keys	Function: TV	Function: TV (previously selected channel number is selected)
POWER	Power OFF	Turning the power off
FACTORY	Factory OFF	Turning Service Factory mode off
MENU	Menu ON	Turning Service Factory mode off and Menu mode on



Changes of the Service Factory menus

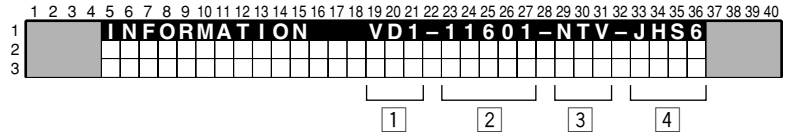


Indications in Service Factory mode



Main-item indications

Four parameters are displayed:



1 Input function

Input Functions	On-Screen Display
INPUT 1- 4	VD 1 - 4
Analog Tuner	AIR
PC	PC

4 Option (Destination, etc.)

Options	On-Screen Display
PDP-R06G	GHS6
PDP-R06C	CHS6

2 SIG mode and screen size

Note: See SIG-Mode Tables. (See next page.)

3 Color system and signal type

Color System and Signal Type		On-Screen Display	Color System and Signal Type		On-Screen Display
NTSC	Composite input	NTV	NTSC	S-connector input	NTS
PAL		PLV	PAL		PLS
PAL N		PNV	PAL N		PNS
PAL M		PMV	PAL M		PMS
SECAM		SCV	SECAM		SCS
4.43NTSC		4NV	4.43NTSC		4NS
BLACK/WHITE		BWV	BLACK/WHITE		BWS
Y / CB / CR		CBR	RGB		RGB
Y / PB / PR		PBR	Digital video signal		DIG

● SIG-Mode Table

The signal mode is displayed in four charecters:

1st and 2nd charecters : Resolutin of the input signal (numerics for the video signals, and alphabetics for the PC signals)
3rd and 4th charecters : Grouping of the V frequencies (refresh rate)
5th charecter : Selection of the screen size by the user is displayed.

SIG-Mode table for video signals (resolutions and V frequencies)

1st and 2nd	3rd and 4th	Signal Type	Fv (Hz)	Fh (kHz)
10	50	SDTV*625i	50.000	15.625
	60	SDTV*525i	60.000	15.750
12	60	SDTV*525i (PAL60)	60.000	15.750
20	50	SDTV*625p	50.000	31.250
	60	SDTV*525p	60.000	31.500
30	50	HDTV*1125i	50.000	28.125
	60	HDTV*1125i	60.000	33.750
40	50	HDTV*750p	50.000	37.500
	60	HDTV*750p	60.000	45.000
50	24	HDTV*1125p	24.000	27.000

Fv: Vertical Frequency, Fh: Horizontal Frequency

SIG-Mode table for PC signals (resolutions and V frequencies)

1st and 2nd	3rd and 4th	Signal Type	Fv (Hz)	Fh (kHz)
C1	70	720x400	70.087	31.469
C2	60	640x480	59.940	31.469
	72		72.809	37.861
	75		75.000	37.500
C4	56	800x600	56.250	35.1556
	60		60.317	37.879
	72		72.188	48.077
	75		75.000	46.875
C7	60	1024x768	60.004	48.363
	70		70.069	56.476
	75		75.029	60.023
C8	56	1280x768	56.250	45.113
	60		59.833	47.986
	70		70.000	56.137

Fv: Vertical Frequency, Fh: Horizontal Frequency

Selection of the screen size by the user is displayed.

5th	Description on GUI	VIDEO	PC	Remarks
0	DOT BY DOT	–	●	
1	4:3	●	●	
2	FULL(FULL1)	●	●	
3	ZOOM	●	–	
4	CINEMA	●	–	
5	WIDE	●	–	
6	FULL 14:9	●	–	
7	CINEMA 14:9	●	–	
8	FULL2	●	●	

●: available, –: not available

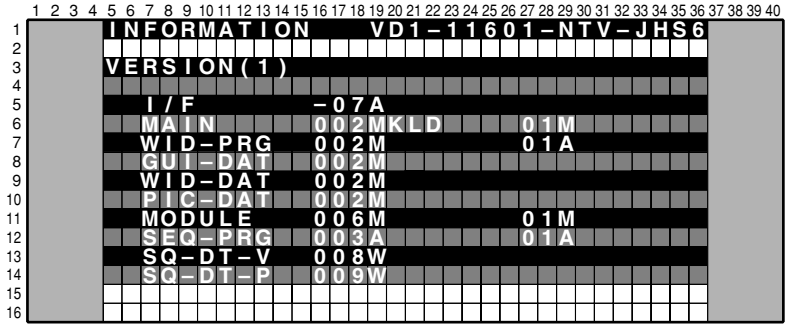
■ Factory Menus

① INFORMATION mode

● Operation items

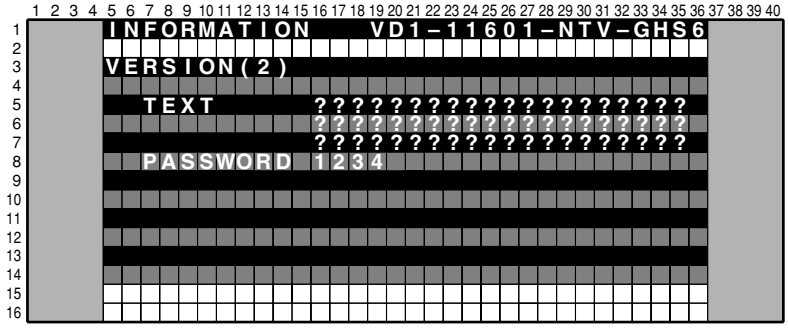
No.	Function / Display	Content	RS-232C
1	VERSION (1)	The flash memory versions for each device are displayed. (common part)	QS1
2	VERSION (2)	The flash memory versions for each device are displayed. (individual part)	QS6
3	MAIN NG	The shutdown generated on Media Receiver side and its time of occurrence are displayed.	QNG
4	TEMPERATURE	Information of temperature and fan status on Media Receiver side are displayed.	QMT
5	HOUR METER	Cumulative power-on time to the Media Receiver is displayed.	–
6	HDMI SIGNAL INFO 1	The file information of HDMI series are displayed.	–
7	HDMI SIGNAL INFO 2		–
8	TUNER SIGNAL INFO	The signal information on TUNER is displayed.	–

1. VERSION (1)



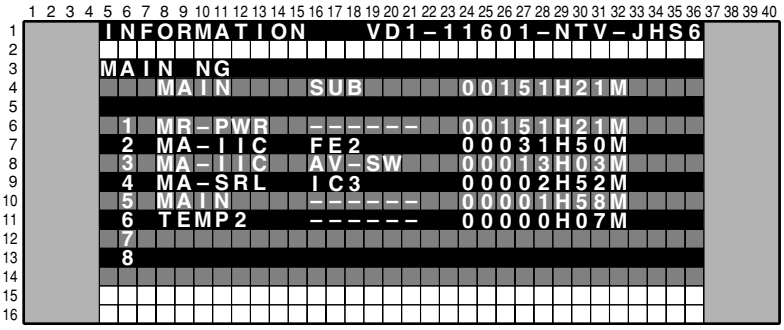
Flash memory on Device	On-Screen Display
IF microcomputer	I/F
Main microcomputer	MAIN
Program for CARRERA-MANTA	WID-PRG
GUI data for CARRERA-MANTA	GUI-DAT
Enhanced data for CARRERA-MANTA.	WID-DAT
Picture Quality data for CARRERA-MANTA	PIC-DAT
Module microcomputer (for the PDP)	MODULE
Program for ASTRA-MANTA (for the PDP)	SEQ-PRG
Sequence data for ASTRA-MANTA Video	SQ-DT-V
Sequence data for ASTRA-MANTA PC	SQ-DT-P

2. VERSION (2)



Device	On - Screen Display	Version Display	Remarks
Teletext ucom Software Version	TEXT	60 character	20 character x 3
User Password	PASSWORD	4 character	

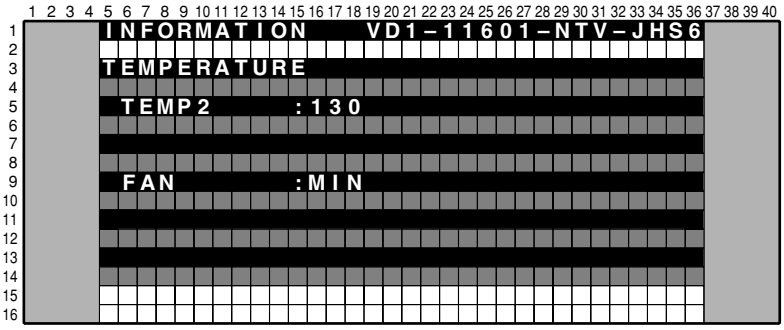
3. MAIN NG



● **Media Receiver NG information**

OSD: MAIN	OSD: SUB	Cause of Shutdown
MODULE	----	Abnormally in Module microcomputer communication
MA-SRL		Abnormally in 3-wire Serial Communication of the Main microcomputer.
	IF	Communication failure of IF microcomputer
	MULTI1	MANTA communication failure (MULIT1)
	I/P	MANTA communication failure (I/P)
	D-SEL	MANTA communication failure (D-SEL)
MA-IIC		Abnormally in Main microcomputer IIC communication
	FE1	Analog Tuner 1 (Front End 1)
	AV-SW	AV Switch
	RGB-SW	RGB Switch
	M-VDEC	Main VDEC
	S-VDEC	Sub VDEC
	ADC	AD/PLL
	HDMI	HDMI
	PLK-T	TMDS Tx
	PLK-R	TMDS Rx
	TX-COM	M2 Communication
	TX-BSY	M2 Busy
	MA-EEP	64k EEPROM
MAIN		Abnormally in Main microcomputer communication
FAN		Fan stopped
TEMP2		Abnormally high temperature of the MR.

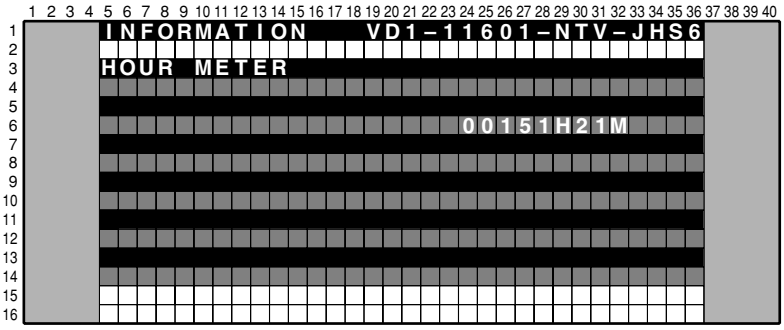
4. TEMPERATURE



TEMP2 : The value read from the temperature sensor built into the Media Receiver is displayed in the range of 000-255. For reference, the approximate value for 60°C is 86 and for 35°C is 67.
Reference: When TEMP2 exceeds 100 (about 78°C), SD LED (Blue) flash 11 times.

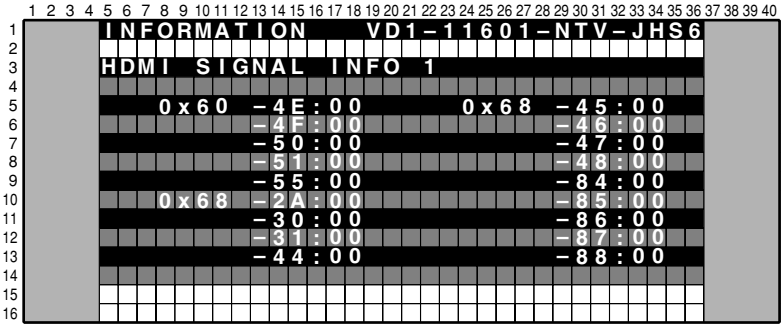
FAN : The value of the Fan output is displayed.
STOP: stopped, MIN: slow speed, MAX: high speed

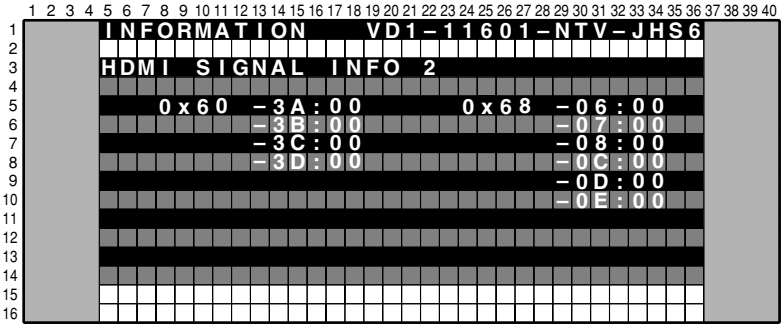
5. HOUR METER



The cumulative power-on time of the Media Receiver is displayed.

6. HDMI SIGNAL INFO



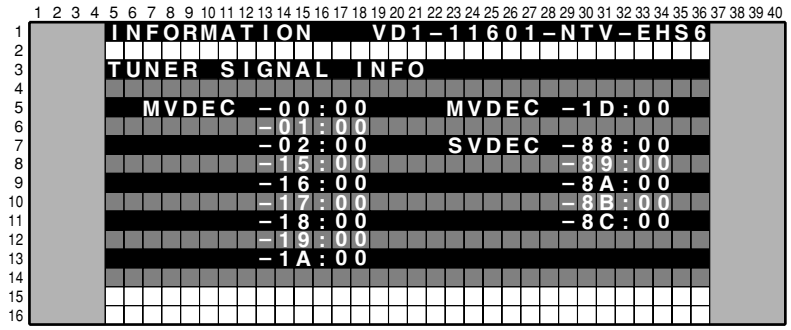


● **Technical examination display (Reading status registers in HDMI receiver and displaying them by HEX value.)**

HDMI SIGNAL INFO 1		
SA		**Context**
0x60	- 4E:	Video DE pixels [7:0]
	- 4F:	Video DE pixels [11:8]
	- 50:	Video DE lines [7:0]
	- 51:	Video DE lines [10:8]
	- 55:	Video status (interlace or progressive, sync polarity)
0x68	- 2A:	Audio in channel status (PCM, copy information etc.)
	- 30:	Audio in SPDIF channel status (sampling frequency)
	- 31:	Audio in SPDIF channel status (sample word length)
	- 44:	AVI InfoFrame data1 (video format etc.)
	- 45:	AVI InfoFrame data2 (colorimetry, aspect ratio)
	- 46:	AVI InfoFrame data3 (video scaling)
	- 47:	AVI InfoFrame data4 (video identification code)
	- 48:	AVI InfoFrame data5 (pixel repeat value for 2880dot)
	- 84:	Audio InfoFrame data1 (channel count, cording type)
	- 85:	Audio InfoFrame data2 (always zero)
	- 86:	Audio InfoFrame data3 (always zero)
	- 87:	Audio InfoFrame data4 (channel / speaker allocation)
	- 88:	Audio InfoFrame data5 (downmix inhibit, level shift value for downmixing)

HDMI SIGNAL INFO 2		
SA		**Context**
0x60	- 3A:	Video full H resolution [7:0]
	- 3B:	Video full H resolution [12:8]
	- 3C:	Video full V lines [7:0]
	- 3D:	Video full V lines [10:8]
0x68	- 06:	N Value for audio clock regeneration method. [7:0]
	- 07:	N Value for audio clock regeneration method. [15:8]
	- 08:	N Value for audio clock regeneration method. [19:16]
	- 0C:	CTS Value for audio clock regeneration method. [7:0]
	- 0D:	CTS Value for audio clock regeneration method. [15:8]
	- 0E:	CTS Value for audio clock regeneration method. [19:16]

7. TUNER SIGNAL INFO



● **Tuner signal information in MVDEC / SVDEC.**

Device	SA	Context
MVDEC	00h	Signal distinction 1
	01h	Signal distinction 2
	02h	Flag detection output
	15h	Noise level detection 1
	16h	Noise level detection 2
	17h	Non - standard signal detection
	18h	Subcarrier signal detection
	19h	ACC data output
	1Ah	ACC information output
	1Dh	Input signal mode
SVDEC	88h	Status register 1 (TV/VCR status)
	89h	Status register 2 (Macrovision detection etc)
	8Ah	Status register 3 (Front-end AGC gain value)
	8Bh	Status register 4 (Subcarrier to horizontal (SCH) phase)
	8Ch	Status register 5 (signal distinction)

② FUNCTION CHECK mode

● **Operation items**

No.	Display	Content	RS-232C
1	FAN <=>	Control FAN speed for Force.	—
2	AFT <=>	Control AFT Lock.	—

③ COMMON ADJ. mode

RGB1

Only for the technical use.

④ PANEL FACTORY mode

● **Operation items**

No.	Function / Display
1	PANEL INFORMATION
2	PANEL WORKS
3	POWER DOWN
4	SHUT DOWN
5	PANEL-1 ADJ
6	PANEL-2 ADJ
7	PANEL REVISE
8	ETC
9	MASK SETUP

Refer to the service manual of the PDP-506P/436P.

⑤ OPTION mode

● **Operation items**

No.	Function/Display	Content	RS-232C
1	PEAK LIMITTER ⇔	Control Peak Limitter (Select ON/OFF)	—
2	EDID WRITE MODE ⇔	Control EDID WRITE MODE (Select DISABLE/ENABLE)	—
3	CH PRESET ⇔	Only for the productical use.	—

⑥ INITIALIZE mode

● **Operation items**

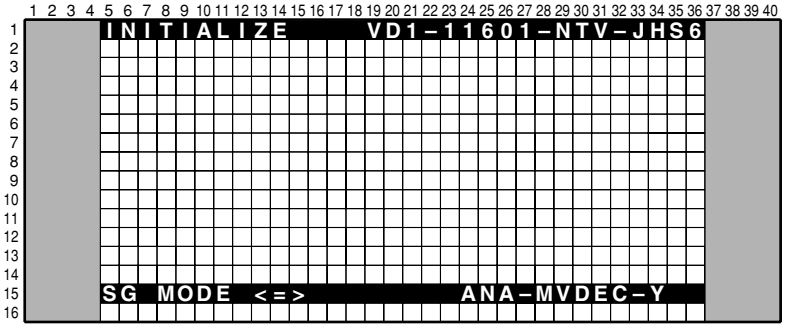
No.	Function/Display	Content	RS-232C
1	SYNC DET (+)	Only for the technical use.	–
2	SG MODE ⇔	Paired SG_MODE with SG_PATTERN. Select SG Route.	–
3	SG PATTERN ⇔	Paired SG_MODE with SG_PATTERN. Select SG Pattern.	–
4	SIDE MASK LEVEL (+)	Adjust Side Mask Color (R, G, B).	BSL GSL RSL
5	FINAL SETUP (+)	Initialize flash memories on virgin product status	FST
6	SR+ ⇔	Select SR+ mode or UART SELECT mode.	–
7	UART SELECT ⇔	Select boud Rate on RS-232C Communication	–
8	CVT AUTO ⇔	Only for the productical use.	–
9	HDMI INTR POSITION (+)	Only for the technical use.	–

1. SYNC DET(+)

Only for the technical use.

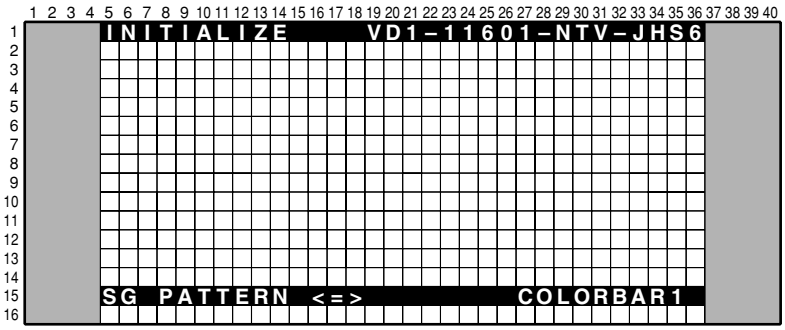
2. SG MODE

The route of the Test Signal from the MVDEC is chosen by this function.
After setting this function, SG pattern should be set.



No.	Display	Function
1	SG OFF	SG is set to OFF
2	DIG MVDEC YCBCR	Digital output (YCbCr)
3	ANA MVDEC RGB	Analog output to the RGB SW (RGB)
4	ANA SVDEC Y	Analog output to the Video SW (Y)
5	ANA MVDEC Y	Analog output to the Video SW (Y)
6	ANA AD YCBCR	Analog output to the RGB SW (YCbCr)
7	ANA AD RGB	Analog output to the RGB SW (RGB)

3. SG PATTERN

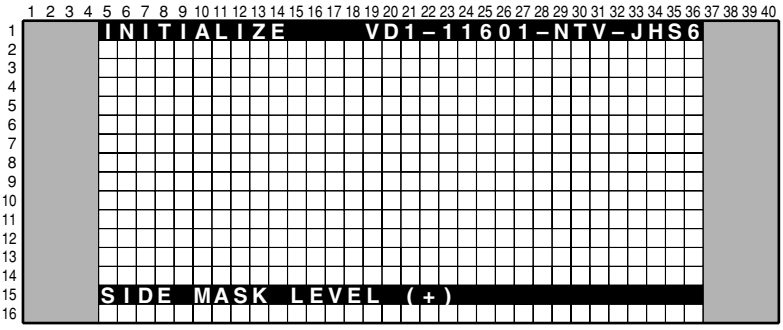


No.	Function/Display	SG Pattern (Brightness IRE Level/Color)	No.	Function/Display	SG Pattern (Brightness IRE Level/Color)
1	COLOR BAR1	Colorbar (75%)	11	RASTER4	Raster (75% Green)
2	COLOR BAR2	Colorbar (100%)	12	RASTER5	Raster (75% Magenta)
3	RAMP1	Ramp (100% white)	13	RASTER6	Raster (75% Red)
4	RAMP2	Ramp (100% Yellow)	14	RASTER7	Raster (75% Blue)
5	RAMP3	Ramp (75% Green)	15	RASTER8	Raster (-% Black)
6	RAMP4	Ramp (75% Red)	16	10STEP1	10STEP (100% white)
7	RAMP5	Ramp (75% Blue)	17	10STEP2	10STEP (100% Yellow)
8	RASTER1	Raster (100% White)	18	10STEP3	10STEP (75% Green)
9	RASTER2	Raster (75% Yellow)	19	10STEP4	10STEP (75% Red)
10	RASTER3	Raster (75% Cyanide)	20	10STEP5	10STEP (75% Blue)

Important notice of the Test Signal mode (SG mode, SG pattern)

- The route switching should be done correctly in the factory mode.
- Y or G signal from SG should be input to the AVI terminal of the MVDEC when the SG signal is output.
- The function of the blanking offset (50 IRE) should be OFF during the SG mode.
- The setting of the Y/C separation function should be set to the NTSC during the SG mode
- Only the RGB and Component signals can be output during SG mode, so only the Y signal is input at the CVBS and S signal mode, thus the picture is composed in black and white color. This isn't a trouble.
- The SG mode 7 (ANA AD RGB) is only for the factory mode. Therefore some probrem (strange color, unstable brightness etc.) might be happened.

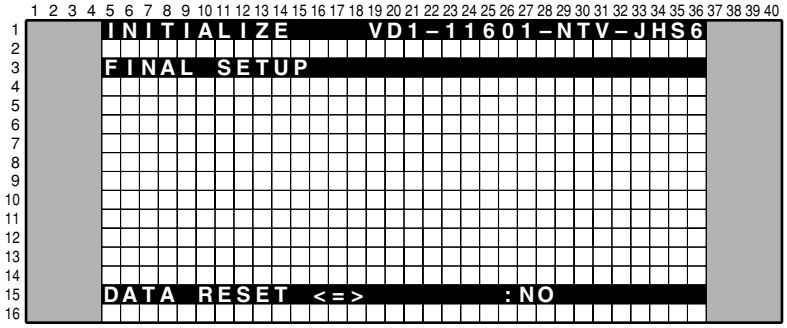
4. SIDE MASK LEVEL



Level of the side mask (R, G, and B) can be adjusted by using this menu.
The input signal is necessary to adjust it.

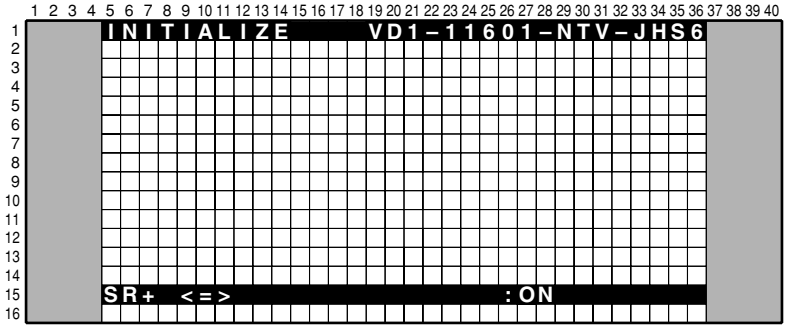
No.	Display	Context	RS-232C
1	R MASK LEVEL ⇔	Adjust Side Mask R (range :000-255)	RSL
2	G MASK LEVEL ⇔	Adjust Side Mask G (range :000-255)	GSL
3	B MASK LEVEL ⇔	Adjust Side Mask B (range :000-255)	BSL

5. FINAL SETUP



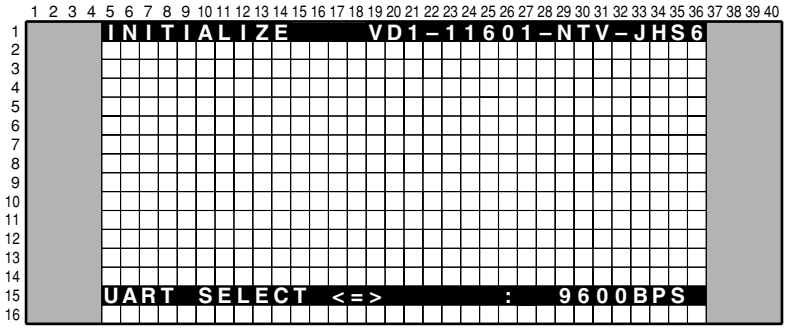
The value of all memorized data are set to shipment status. If the ENTER key is kept on pressing for 5 second when the status of this menu is YES, final setup will be done.

6. SR+



SR+ function → ON, RS-232C function → OFF

7. UART SELECT



This function can be selected when the SR+ function is OFF.

Option No.	Display	Operation / Control	RS-232C
1 (Initial setting)	----	To Set to SR+ (9600bps)	SR+ is ON
2	1200	To Set to RS-232C (1200bps)	SR+ is OFF
3	2400	To Set to RS-232C (2400bps)	SR+ is OFF
4	4800	To Set to RS-232C (4800bps)	SR+ is OFF
5	9600	To Set to RS-232C (9600bps)	SR+ is OFF
6	19200	To Set to RS-232C (19200bps)	SR+ is OFF
7	38400	To Set to RS-232C (38400bps)	SR+ is OFF

6.4 LIST OF RS-232C COMMANDS

RS-232C commands can be used in Service Factory mode. Before using RS-232C commands, it is necessary to change the factory presetting.
Also the RS-232C commands for the panle is not listed. Please refer to panle's service manual.

Command	Operation	Remarks
B		
BSL	Adjust side mask B	
C		
CNG	Clearing MR NG information	
CHR	Clearing MR Hour meter	
D		
DW*	Decreasing the adjustment value by*	*:1-9, 0 (0 means 10), F (making the adjustment value the minimum)
F		
FAN	Turning Service Factory mode off.	
FAY	Turning Service Factory mode on.	
FST	Final Set Up	
G		
GSL	Adjusting side mask G	
I		
INA	Selection of tuner for terrestrial analog signals.	
INC***	Selection of tuner for terrestrial digital signals.	
INH	Selection of SD card/PCMCIA card	
INPS01	Input selection: input 1	
INPS02	Input selection: input 2	
INPS03	Input selection: input 3	
INPS04	Input selection: input 4	
INPS05	Input selection: input 5	
O		
OSDS00	Turning On-Screen Display off	Prohibit On-Screen Display.
OSDS01	Turning On-Screen Display on	Permit On-Screen Display.
P		
POF	Turning the power off.	
PON	Turning the power on.	
Q		
QS1	Obtaining the version data for each device.	
QS6	Obtaining the any version.	
QMT	Obtaining the MR temperature information.	
QNG	Obtaining NG data of the MR.	
R		
RSL	Adjustment od side mask R	
U		
UP*	Increasing the adjustment value by *	*:1-9, 0 (0 means 10), F (making the adjustment value the maximum)
Z		
ZME	Initializing of the EEPROM video data	

6.5 OUTLINE OF COMMANDS

If you want to see version information (ex. QS1,QS6,Factory Menu), Please see 10 seconds after starting.

QS1: Returning information on the module and the version of the software.

Order	Part	Data Content	Size	Remarks
0	-	Received Command Name on MR	3 byte	'QS1' only
1	MDU	Display Information 1	1 byte	
2		Display Information 2	1 byte	
3		Display Information 3	1 byte	
4		Display Information 4	1 byte	
5		Display Information 5	1 byte	
6		Boot Version of Module microcomputer.	3 byte	
7		Program Version of Module microcomputer.	8 byte	
8		Boot Version of ASTRA-MANTA	3 byte	
9		Program Version of ASTRA-MANTA	8 byte	
10		Sequence Version (43VIDEO)	4 byte	
11		Sequence Version (43PC)	4 byte	
12		Sequence Version (50VIDEO)	4 byte	
13		Sequence Version (50PC)	4 byte	
14	MR	, (comma)	1 byte	
15		MR Information 1	1 byte	
16		MR Information 2	1 byte	
17		MR Information 3	1 byte	
18		MR Information 4	1 byte	
19		Version of IF microcomputer	4 byte	
20		Version of Main microcomputer	8 byte	
21		Boot Version of Main microcomputer	4 byte	
22		Program Version of CARRERA-MANTA	8 byte	
23		Boot Version of CARRERA-MANTA	4 byte	
24		GUI Version of CARRERA-MANTA	8 byte	
25		Enhanced Version of CARRERA-MANTA	8 byte	
26		PIC Version of CARRERA-MANTA	8 byte	

QS6: Returning information of the Flash Device.

Order	Data Content	Size	Remarks
0	Received Command Name on MR	3 byte	'QS6' only
1	Version of Text	60 byte	
2	User Password	4 byte	

QMT: Returning information of MR temperature and FAN speed.

Order	Data Content	Size	Remark
1	Received Command Name on MR	3 byte	'QMT' only
2	MR Temperature	3 byte	
3	MR FAN Speed	1 byte	0: STOP 1: MIN 2: MAX

QNG: Returning data (logs keep on Main microcomputer) on shutdown of Media Receiver.

Order	Data	Size	Context
0	Received Command Name on MR	3 byte	'QNG' only
1	Latest NG data	1 byte	
2	Data of subcategory for the latest NG	1 byte	
3	Data of MR hour meter for the latest NG	7 byte	
4	Data of temperature for the latest NG	3 byte	
5	2nd latest NG data	1 byte	
6	Data of subcategory for the 2nd latest NG	1 byte	
7	Data of MR hour meter for the 2nd latest NG	7 byte	
8	Data of temperature for the 2nd latest NG	3 byte	
:	:	:	
29	7th latest NG data	1 byte	
30	Data of subcategory for the 8th latest NG	1 byte	
31	Data of MR hour meter for the 8th latest NG	7 byte	
32	Data of temperature for the 8th latest NG	3 byte	

• Details on the NG data and subcategory

Data	Cause of Shutdown	Remarks
0	Normal	
1	Failure of communication to Module microcomputer	
2	3-wire Serial Communication of Main microcomputer.	Subcategory ⇒ 1
3	IIC Communication failure of Main microcomputer	Subcategory ⇒ 2
4	Communication failure of Main microcomputer &Unknown Error	
5	Fan stopped	
6	Abnormally high temperature at MR.	
8	Abnormally in RST2 of MR (power decrease of DC-DC converter)	

• Data on Subcategories for failure in 3-wire serial communication of Main microcomputer (subcategory 1)

Data	Cause of Shutdown	Remarks
0	Non subcategory	
1	Communication failure of IF microcomputer	Power OFF
2	MANTA communication failure (MULIT1)	Power OFF
3	MANTA communication failure (MULIT2)	Reserved
4	MANTA communication failure (I/P)	
5	MANTA communication failure (D-SEL)	

• Data on Subcategories for failure in IIC communication of Main microcomputer (subcategory 2)

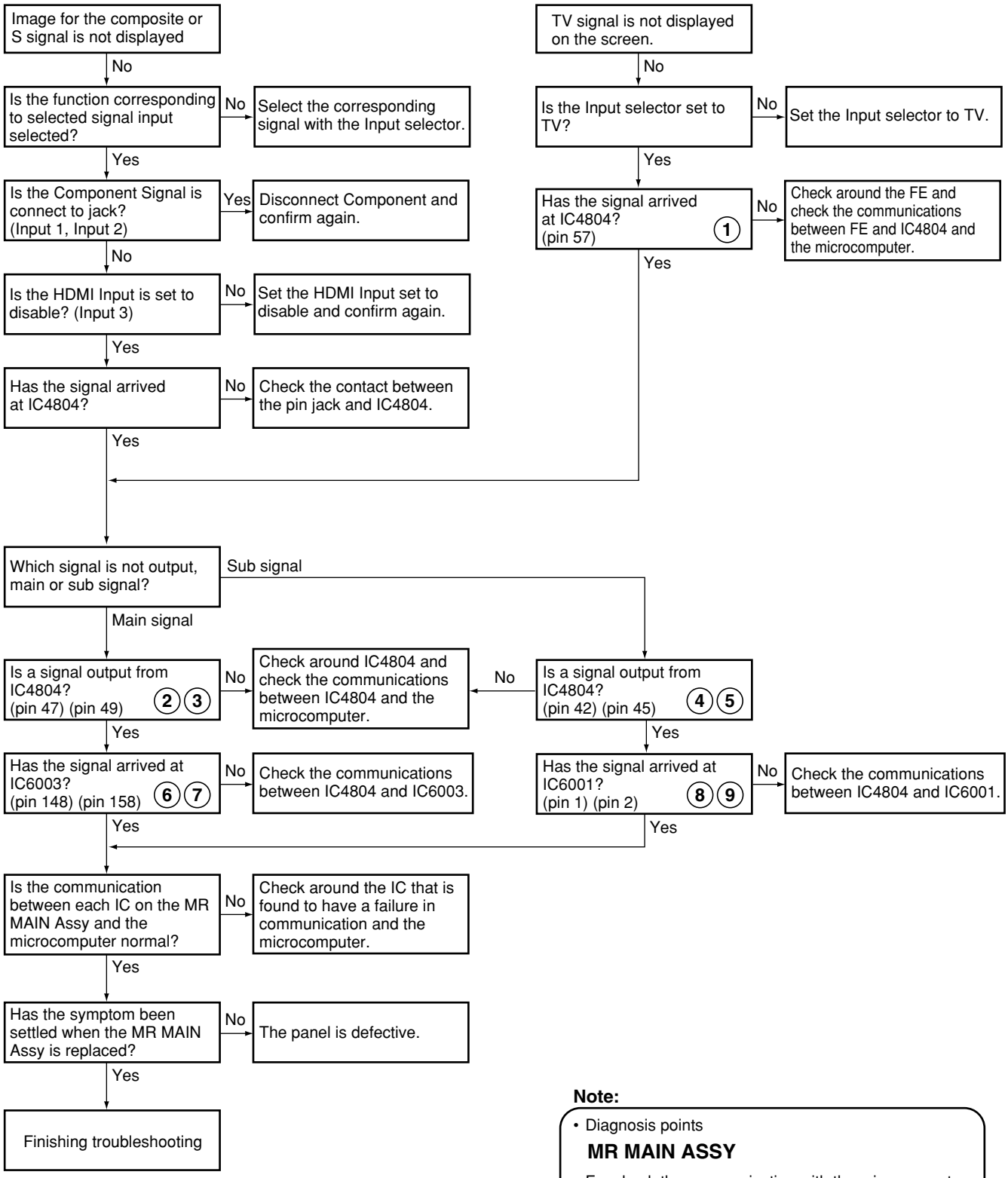
Data	Cause of Shutdown	Data	Cause of Shutdown
0	Non subcategory	A	AD/PLL
1	Analog Tuner 1 (Front End 1)	B	HDMI
4	AV Switch	C	TMDS Tx
5	RGB Switch	D	TMDS Rx
8	Main VDEC	E	M2 Communication
9	Sub VDEC	F	M2 Busy
		G	64k EEPROM

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TROUBLESHOOTING

● **Image for the composite or S or TV signal is not displayed**



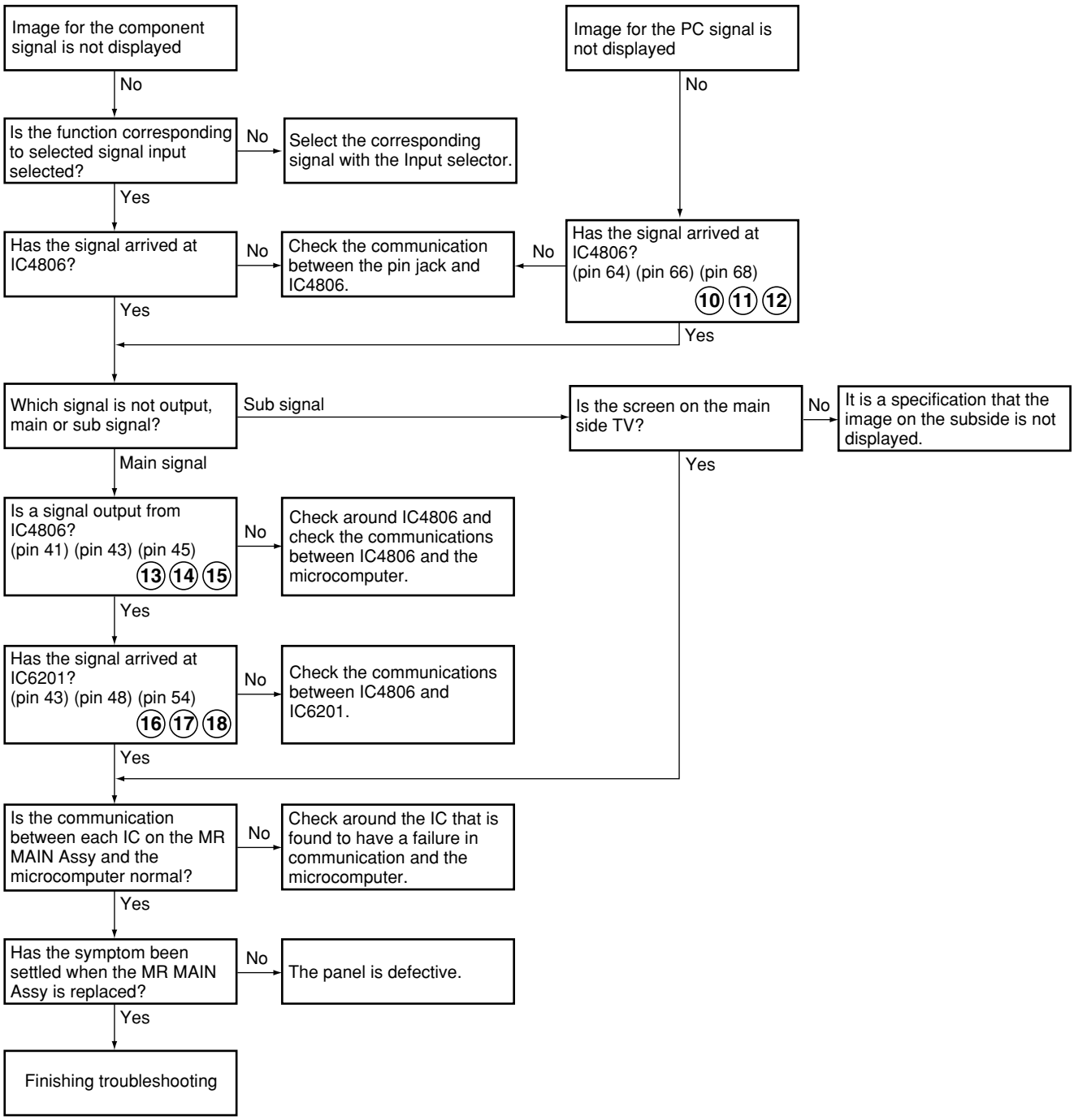
Note:

- Diagnosis points

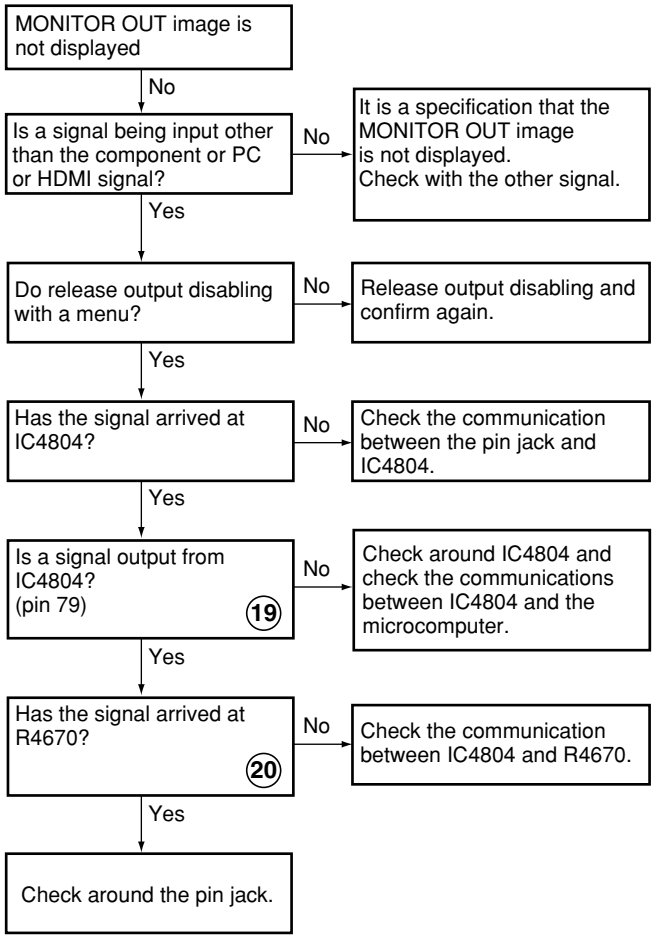
  MR MAIN ASSY

- For check the communication with the microcomputer, refer to the section 6.3 SERVICE FACTORY MODE.
- The encircled numbers denote measuring point in the Waveforms for Troubleshooting.

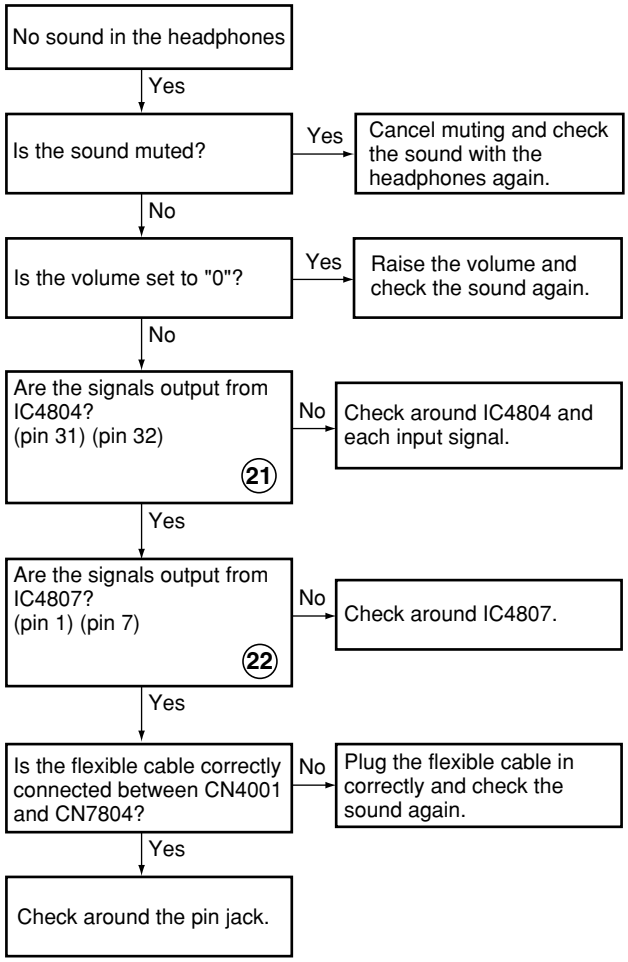
● Image for the component or PC signal is not displayed



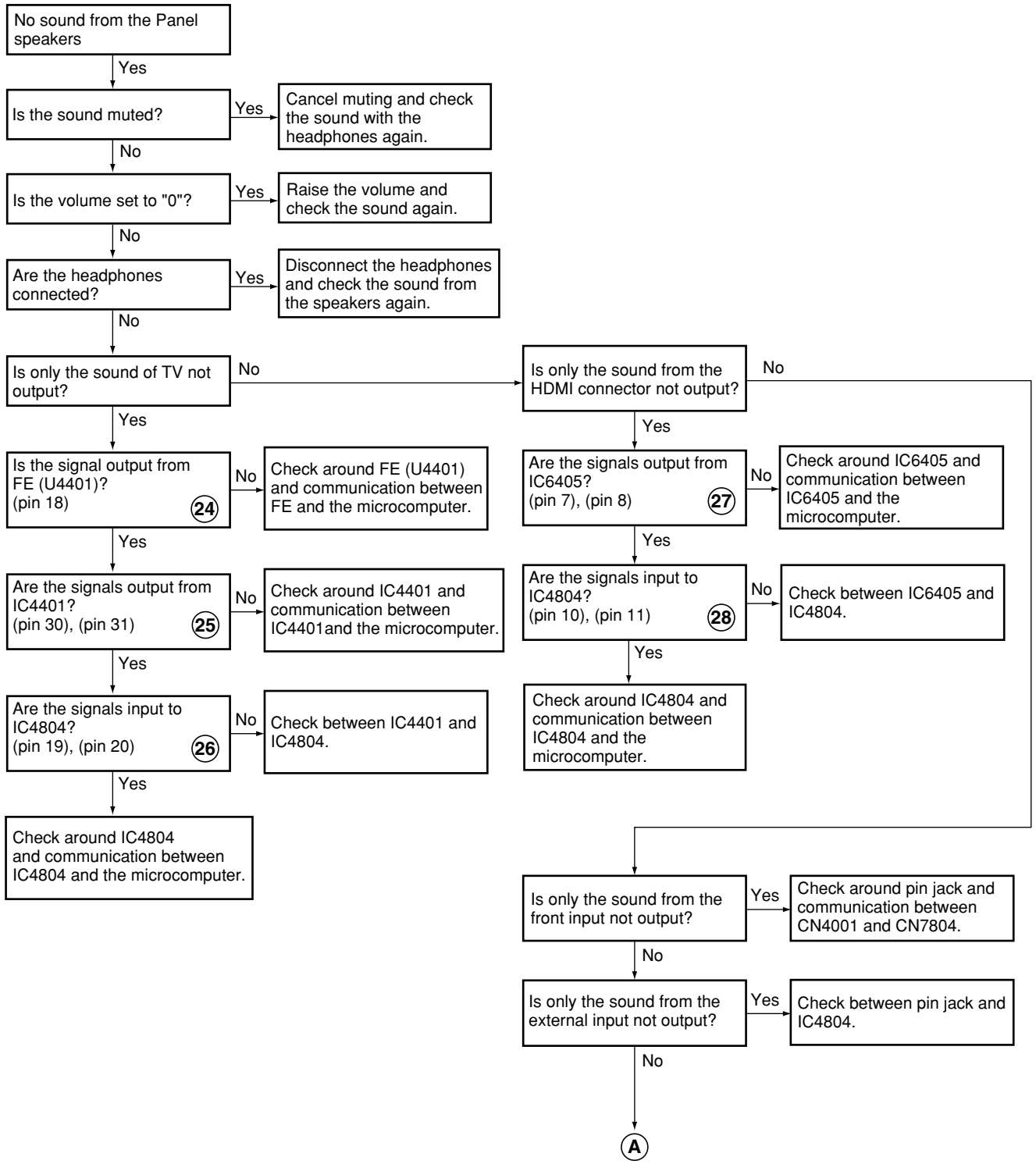
● MONITOR OUT image is not displayed



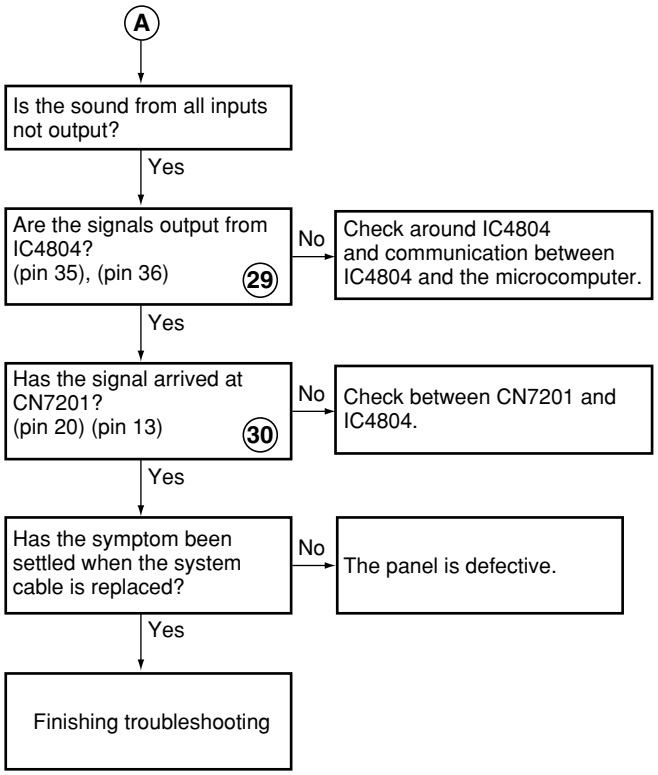
● No sound from the headphones and audio output



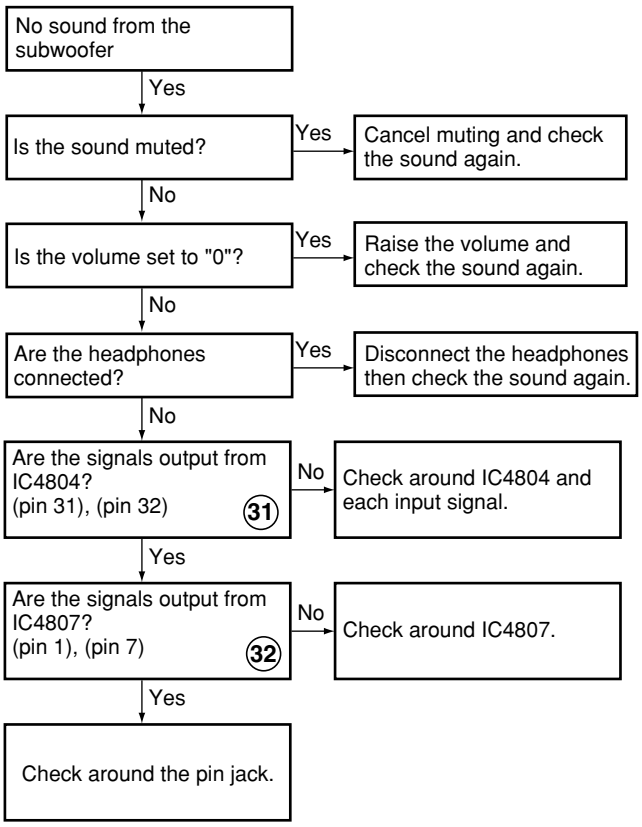
● No sound from the Panel speakers (1/2)



● No sound from the speakers (2/2)



● No sound from the subwoofer

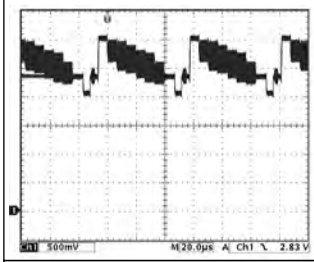


● Waveforms for Troubleshooting

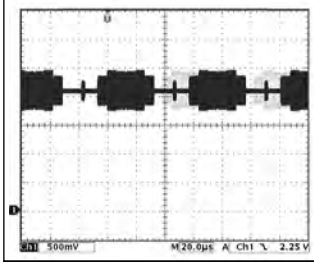
MR MAIN ASSY

• Color-bar input unless otherwise noted

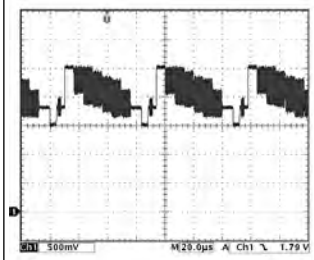
① IC4804-pin 57
V: 500mV/div. H: 20µsec/div.



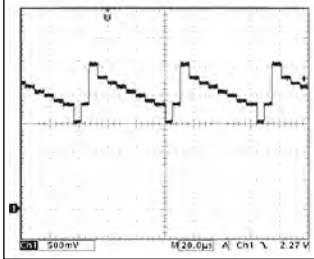
② IC4804-pin 47 S-Video
V: 500mV/div. H: 20µsec/div.



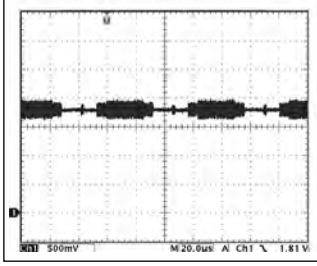
③ IC4804-pin 49 Composite
V: 500mV/div. H: 20µsec/div.



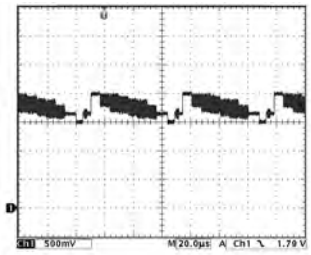
IC4804-pin 49 S-Video
V: 500mV/div. H: 20µsec/div.



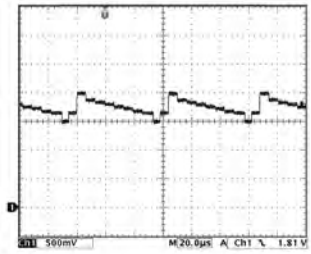
④ IC4804-pin 42 S-Video
V: 500mV/div. H: 20µsec/div.



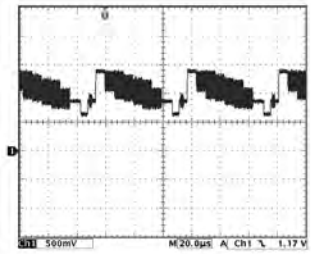
⑤ IC4804-pin 45 Composite
V: 500mV/div. H: 20µsec/div.



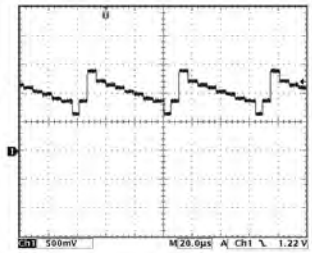
IC4804-pin 45 S-Video
V: 500mV/div. H: 20µsec/div.



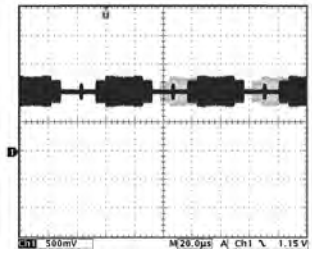
⑥ IC6003-pin 148 Composite
V: 500mV/div. H: 20µsec/div.



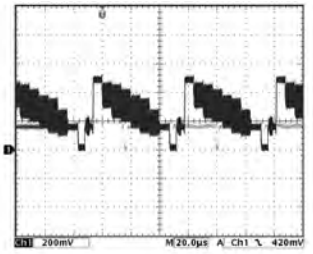
IC6003-pin 148 S-Video
V: 500mV/div. H: 20µsec/div.



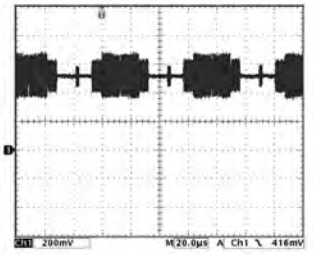
⑦ IC6003-pin 158 S-Video
V: 500mV/div. H: 20µsec/div.



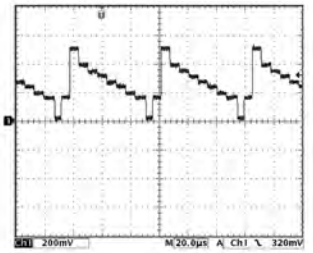
⑧ IC6001-pin 1 Composite
V: 200mV/div. H: 20µsec/div.



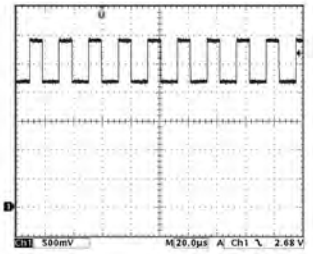
IC6001-pin 1 S-Video
V: 200mV/div. H: 20µsec/div.



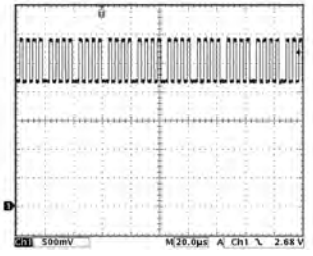
⑨ IC6002-pin 2 S-Video
V: 200mV/div. H: 20µsec/div.



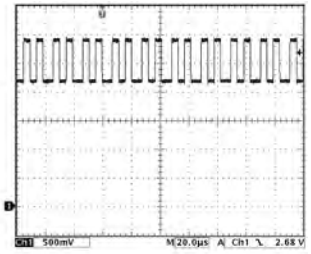
⑩ IC4806-pin 64 PC
V: 500mV/div. H: 20µsec/div.



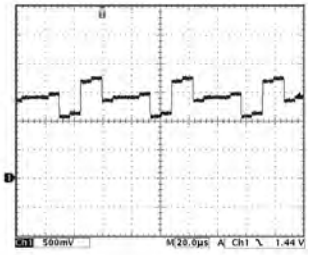
⑪ IC4806-pin 66 PC
V: 500mV/div. H: 20µsec/div.



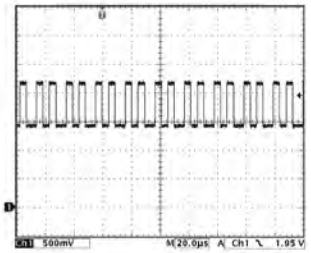
⑫ IC4806-pin 68 PC
V: 500mV/div. H: 20µsec/div.



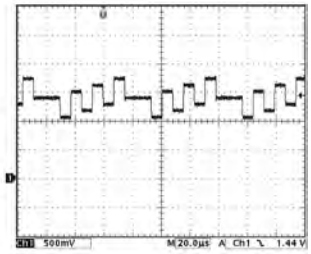
⑬ IC4806-pin 41 Component
V: 500mV/div. H: 20µsec/div.



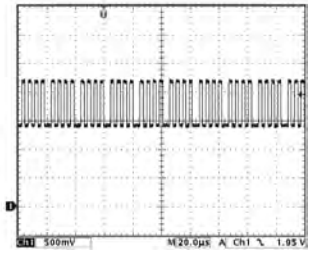
IC4806-pin 41 PC
V: 500mV/div. H: 20µsec/div.



⑭ IC4806-pin 43 Component
V: 500mV/div. H: 20µsec/div.

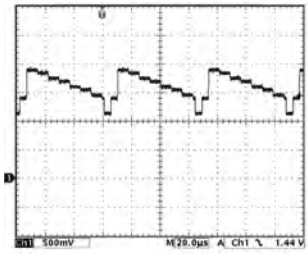


IC4806-pin 43 PC
V: 500mV/div. H: 20µsec/div.

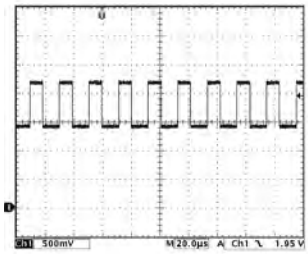


• Color-bar input unless otherwise noted

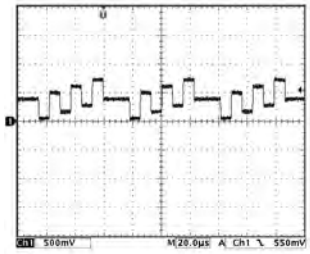
(15) IC4806-pin 45 Component
V: 500mV/div. H: 20µsec/div.



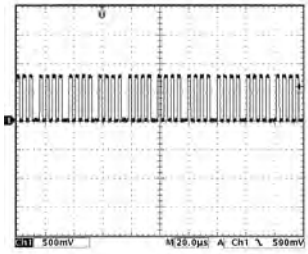
IC4806-pin 45 PC
V: 500mV/div. H: 20µsec/div.



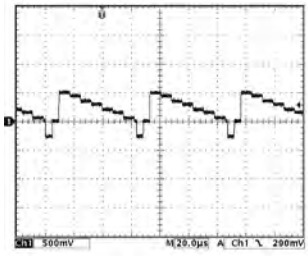
(16) IC6201-pin 43 Component
V: 500mV/div. H: 20µsec/div.



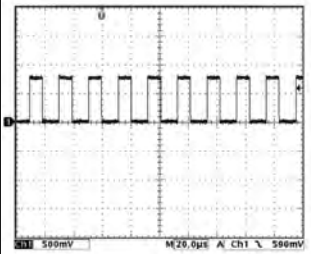
IC6201-pin 43 PC
V: 500mV/div. H: 20µsec/div.



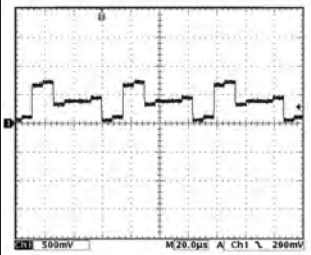
(17) IC6201-pin 48 Component
V: 500mV/div. H: 20µsec/div.



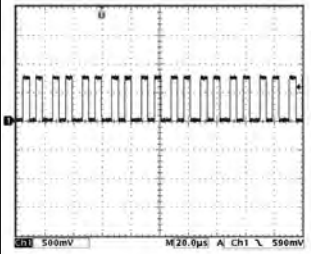
(17) IC6201-pin 48 PC
V: 500mV/div. H: 20µsec/div.



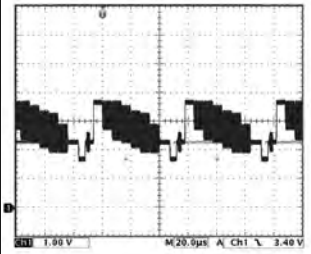
(18) IC6201-pin 54 Component
V: 500mV/div. H: 20µsec/div.



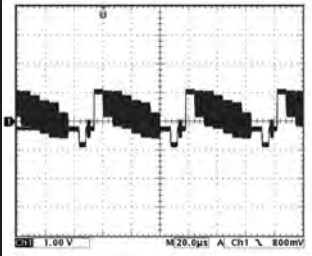
IC6201-pin 54 PC
V: 500mV/div. H: 20µsec/div.



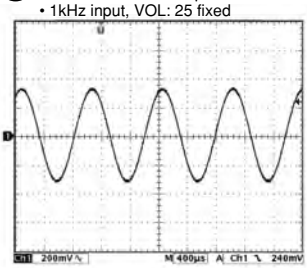
(19) IC4804-pin 79
V: 1V/div. H: 20µsec/div.



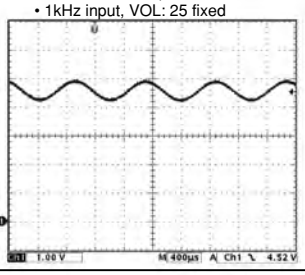
(20) R4670
V: 1V/div. H: 20µsec/div.



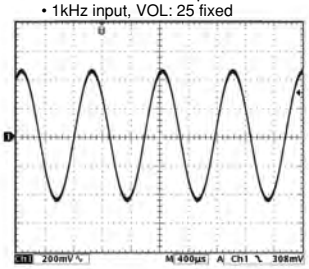
(21) IC4804-pins 31, 32 AC
V: 200mV/div. H: 400µsec/div.
• 1kHz input, VOL: 25 fixed



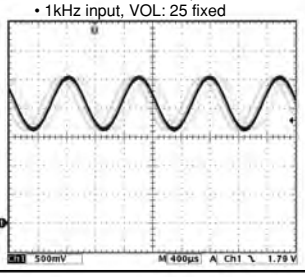
IC4804-pins 31, 32 DC
V: 1V/div. H: 400µsec/div.
• 1kHz input, VOL: 25 fixed



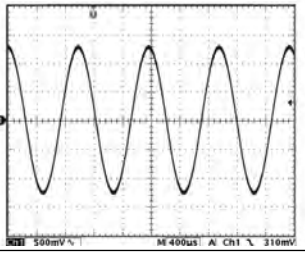
(22) IC4807-pins 1, 7 AC
V: 200mV/div. H: 400µsec/div.
• 1kHz input, VOL: 25 fixed



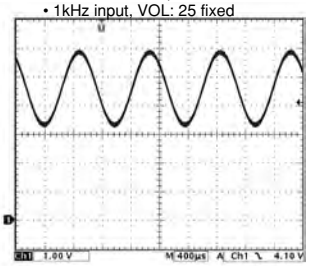
IC4807-pins 1, 7 DC
V: 500mV/div. H: 400µsec/div.
• 1kHz input, VOL: 25 fixed



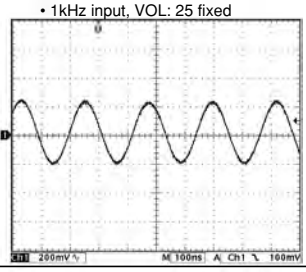
(23) IC4804-pins 33, 34 AC
V: 500mV/div. H: 400µsec/div.
• 1kHz input, VOL: 25 fixed



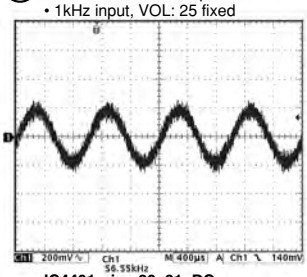
(23) IC4804-pins 33, 34 DC
V: 1V/div. H: 400µsec/div.
• 1kHz input, VOL: 25 fixed



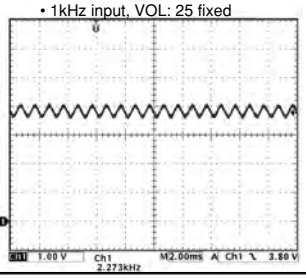
(24) U4401-pin 18=C4403
V: 200mV/div. H: 100nsec/div.
• 1kHz input, VOL: 25 fixed



(25) IC4401-pins 30, 31 AC
V: 200mV/div. H: 400µsec/div.
• 1kHz input, VOL: 25 fixed

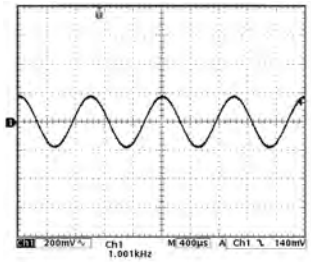


IC4401-pins 30, 31 DC
V: 1V/div. H: 2msec/div.
• 1kHz input, VOL: 25 fixed

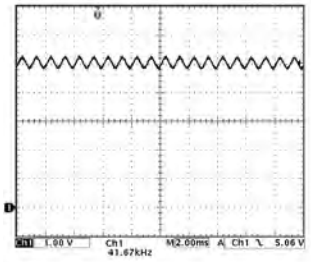


• 1kHz input, VOL: 25 fixed unless otherwise noted

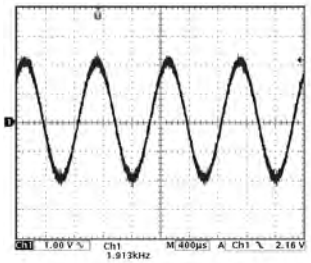
26 **IC4804-pins 19, 20 AC**
V: 200mV/div. H: 400µsec/div.



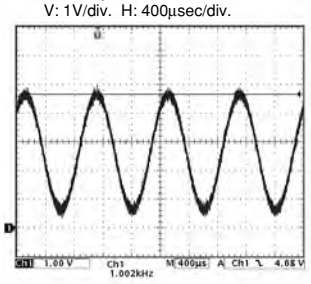
IC4804-pins 19, 20 DC
V: 1V/div. H: 2msec/div.



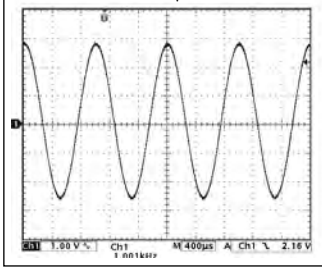
27 **IC6405-pins 7, 8 AC**
V: 1V/div. H: 400µsec/div.



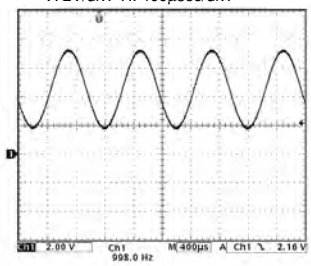
IC6405-pins 7, 8 DC
V: 1V/div. H: 400µsec/div.



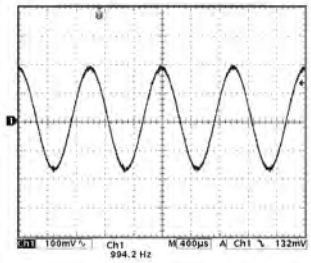
28 **IC4804-pins 10, 11 AC**
V: 1V/div. H: 400µsec/div.



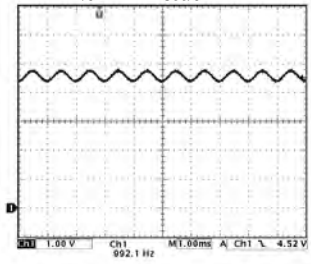
28 **IC4804-pins 10, 11 DC**
V: 2V/div. H: 400µsec/div.



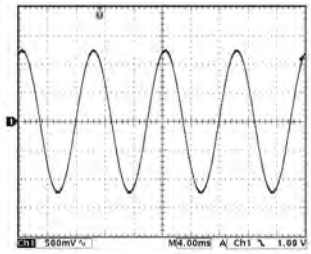
29 **IC4804-pins 35, 36 AC**
V: 100mV/div. H: 400µsec/div.



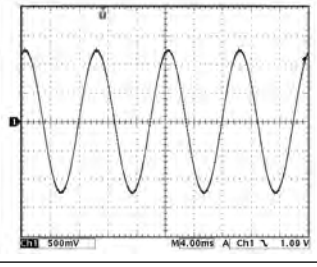
IC4804-pins 35, 36 DC
V: 1V/div. H: 1msec/div.



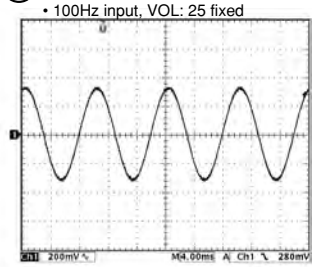
30 **CN7201-pins 13, 20 AC**
V: 500mV/div. H: 4msec/div.



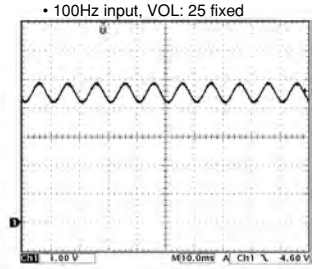
CN7201-pins 13, 20 DC
V: 500mV/div. H: 4msec/div.



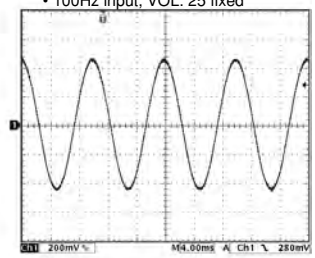
31 **IC4804-pins 31, 32 AC-SUBWOO**
V: 200mV/div. H: 4msec/div.
• 100Hz input, VOL: 25 fixed



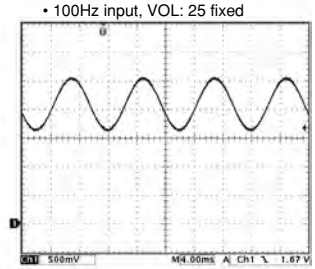
IC4804-pins 31, 32 DC-SUBWOO
V: 1V/div. H: 10msec/div.
• 100Hz input, VOL: 25 fixed



32 **IC4808-pins 1, 7 AC-SUBWOO**
V: 200mV/div. H: 4msec/div.
• 100Hz input, VOL: 25 fixed



IC4808-pins 1, 7 DC-SUBWOO
V: 500mV/div. H: 4msec/div.
• 100Hz input, VOL: 25 fixed



7.1.2 DISASSEMBLY

Note : Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

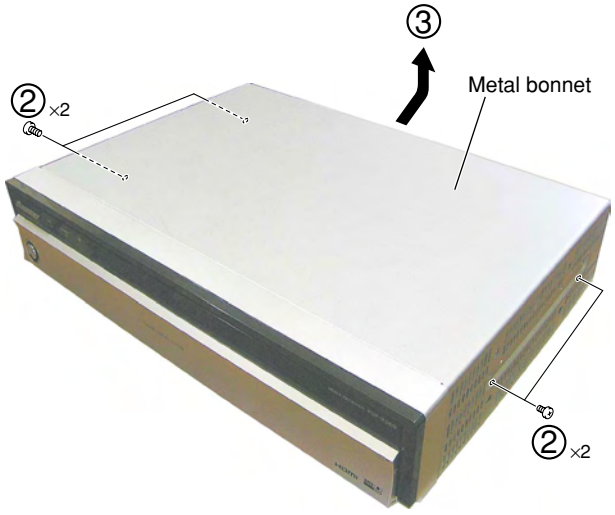
1 Metal Bonnet

① Remove the three screws.

● **Rear view**

② Remove the four screws.

③ Remove the metal bonnet while pulling it backward.



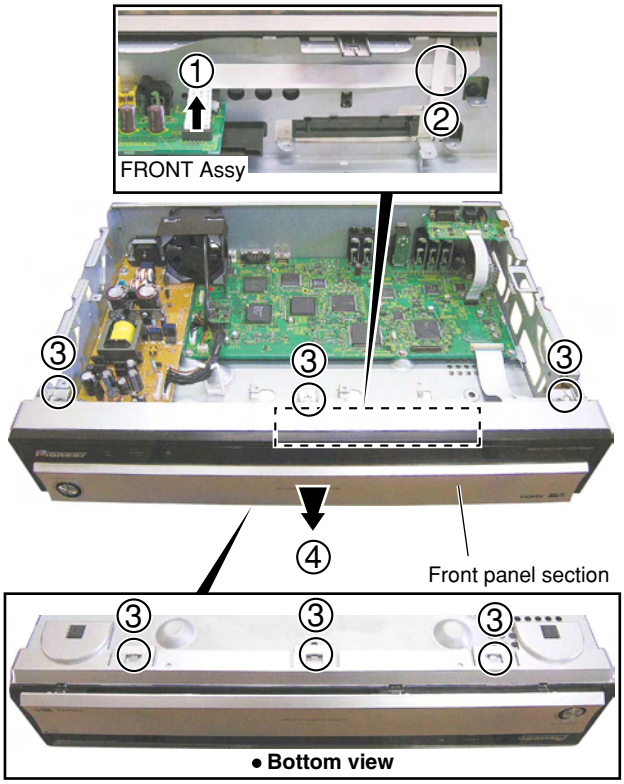
2 Front Panel Section

① Disconnect the flexible cable.

② Remove the flexible cable from the flat clamp.

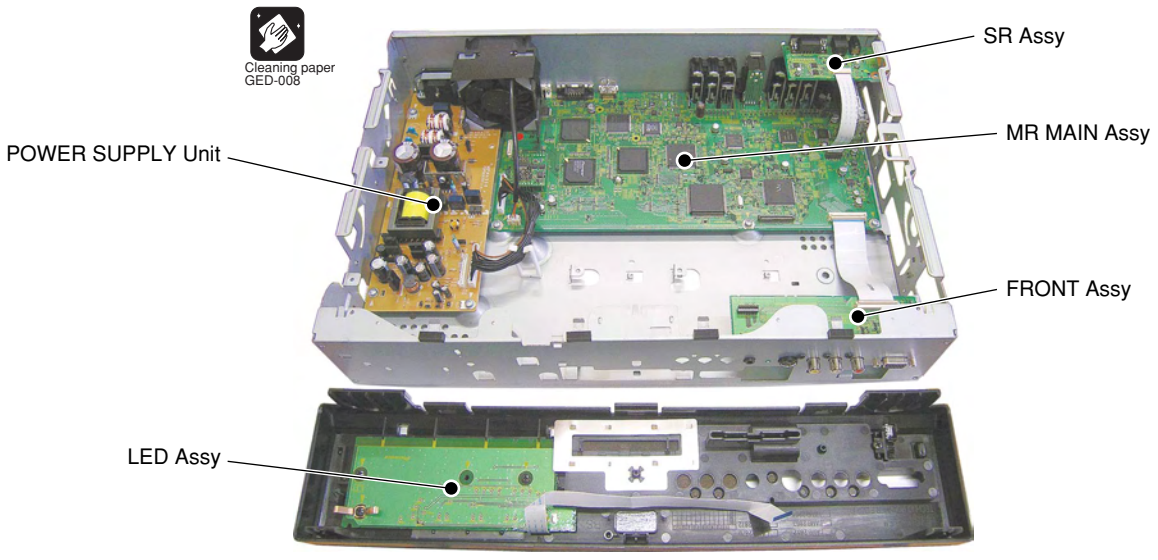
③ Unhook the six hooks.

④ Remove the front panel section.



● **Bottom view**

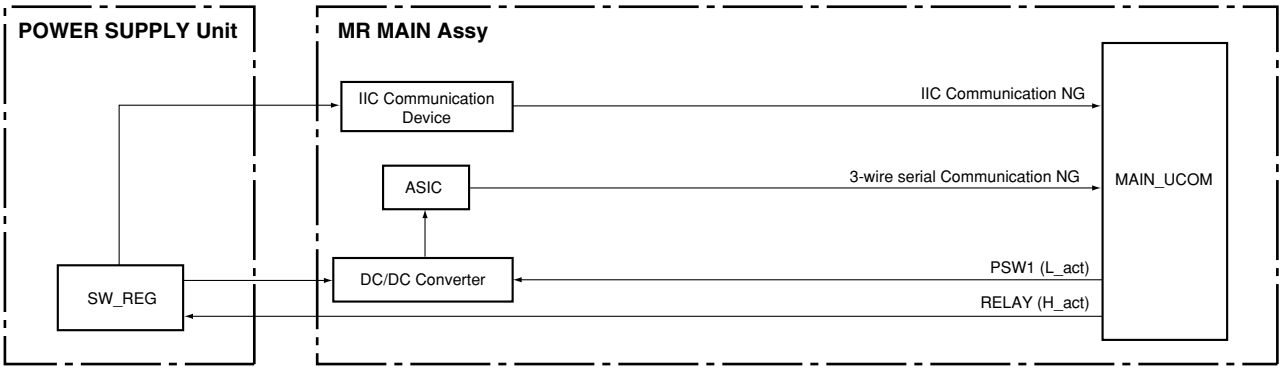
PCB Location



7.2 EXPLANATION
7.2.1 PROCESSING IN ABNORMALITY

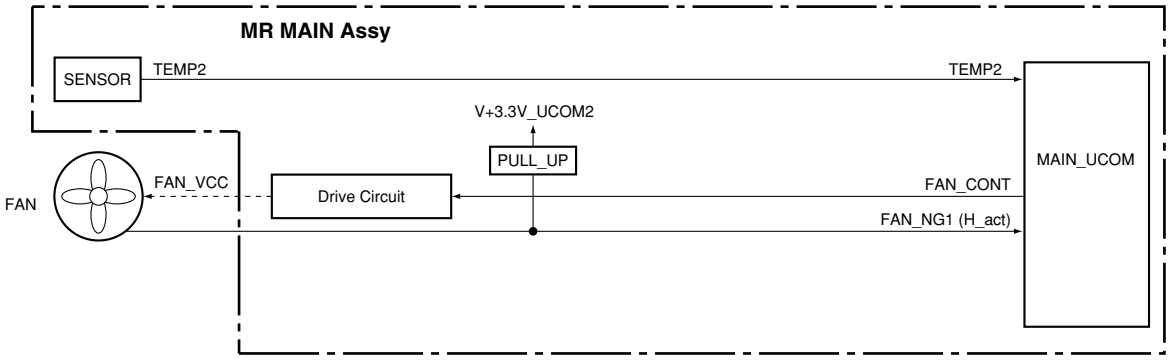
Power supply and DC-DC converter

● **Circuit diagram**



Fan and temperature sensor

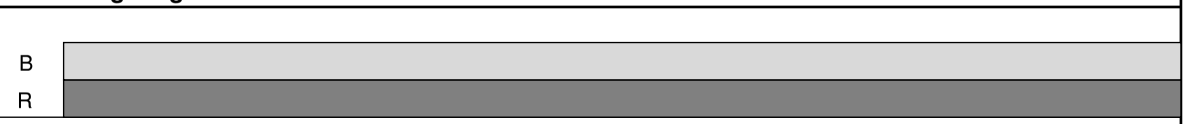
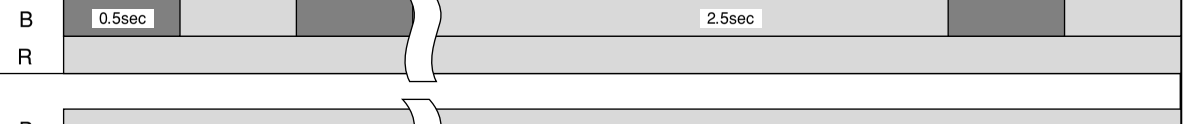
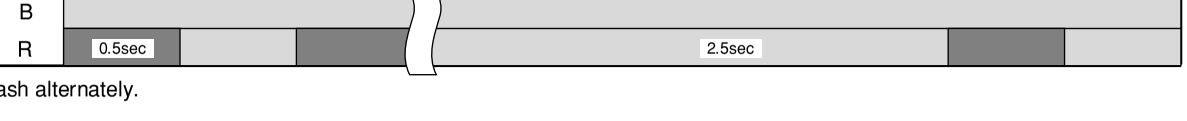
● **Circuit diagram**



● **Specifications for port monitoring**

Port Name	SD/PD Indication	Assigned Pin	Active
FAN_NG 1	FAN	155	Shutdown with H
TEMP2	Abnormally high temperature in the MR	76	Shutdown when the value exceeds the predetermined value

LED-lighting patterns

Status of the Unit		LED-lighting Pattern
Standby, power management	Lit in red	
Power on	Lit in blue	
PDP's power not on	Flashing in red (at 1-sec intervals)	
System cable disconnected *	Flashing alternately in red and blue (at 1-sec intervals)	
Waiting for start of rewriting by the microcomputer		
Waiting for finish of rewriting by the microcomputer		
Shutdown (circuit protection)	Flashing in blue n times (initially at 0.5-sec intervals then 2.5-sec intervals)	
Power-down (circuit protection)	Flashing in red for n times (initially at 0.5-sec intervals then 2.5-sec intervals)	

* In this case, the red and blue areas on the screen of the panel flash alternately.

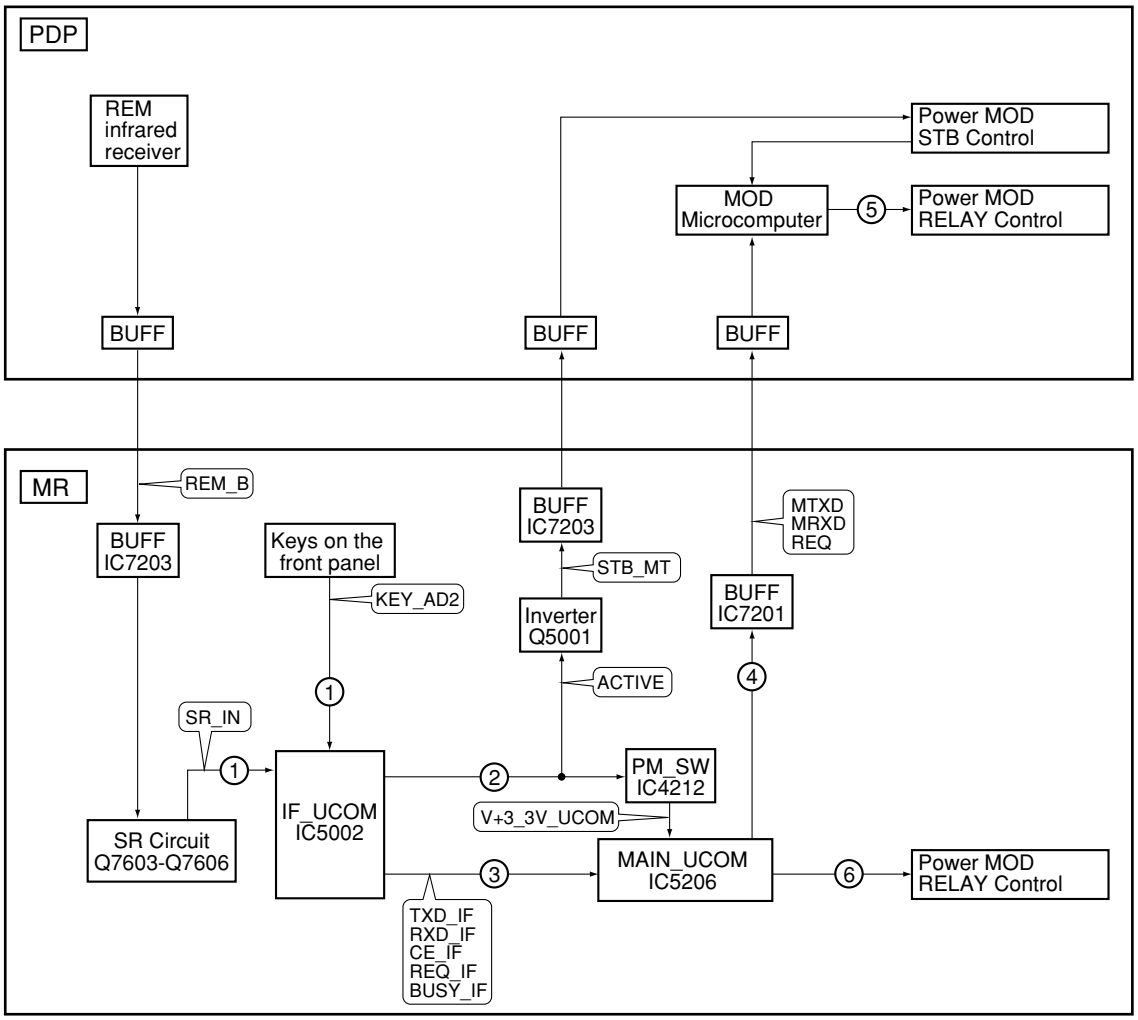
■ Defective points assumed from the number of times of LED flashing

No. of times of LED flashing				Category *1	Site detected as defective	Possible defective points (representative examples)	OSD when detected (warning message)
LEDs on the panel		LEDs on the MR					
Red	Blue	Red	Blue				
	Blue 1	Red		SD	Panel drive IC	*2	None
	Blue 2	Red			Module section IIC	*2	None
	Blue 3	Red			Power decrease of DIGITAL-DC-DC	*2	None
	Blue 4	Red			Panel having abnormally high temperature	*2	Power off. Internal temperature is too high. Check temperature around PDP. [SD04] *6
	Blue 5	Red			Short-circuiting of the speakers	*2	Internal protection circuit turns power off. Is there a short in speaker cable? (SD05)
Red			Blue 6		Module microcomputer	Disconnection of the system cable Defective module microcomputer or its peripheral circuits of the panel (Refer to the service manual of the PDP-436PG or PDP-506PG.) Defective main microcomputer (IC5206) Failure in communication (TXD_MD, RXD_MD, REQ_MD) between the panel's module microcomputer and IC5206 (main microcomputer)	None
Red			Blue 7		3-wire serial connection of the main section	Defective IC5002 or its peripheral circuits Failure in communication (TXD_IF, RXD_IF, CLK_IF, CE_IF, REQ_IF, BUSY_IF) between IC5002 and IC5206 (main microcomputer) Defective IC7001 or its peripheral circuits Failure in communication (TXD_IC3, RXD_IC3, CLK_IC3, CE_IC3, REQ_IC3, BUSY_IC3) between IC7001 and IC5206 (main microcomputer)	None
Red			Blue 8		IIC of the main section	Defective U4401 (FE1) or its peripheral circuits Defective IC4401 (MPX) or its peripheral circuits Defective IC4806 (RGB_SW) or its peripheral circuits Defective ICxxxx (GCR) or its peripheral circuits *4 Defective IC6001 (S-VDEC) or its peripheral circuits Defective IC6404 (HDMI) or its peripheral circuits Defective ICxxxx (PLK-R) or its peripheral circuits Defective IC5405 (TTX-COM, TTX-BSY) or its peripheral circuits Defective IC5202 (MA-EEP) or its peripheral circuits Defective Uxxxx (FE2) or its peripheral circuits *3 Defective IC4804 (AV_SW) or its peripheral circuits Defective ICxxxx (CCD) or its peripheral circuits *3 Defective IC6003 (M-VDEC) or its peripheral circuits Defective IC6201 (ADC) or its peripheral circuits Defective IC7202 (PLK-T) or its peripheral circuits Failure in communication (SCL_AV, SDA_AV, SCL_MA, SDA_MA, SCL_EP, SDA_EP, SCL_TTX, SDA_TTX, SCL-HDCP, SDA-HDCP) between one of the above devices and IC5206 (main microcomputer)	None
Red			Blue 9		Main microcomputer	Defective IC5206 (main microcomputer) Failure in communication (TXD_IF, RXD_IF, CLK_IF, CE_IF, REQ_IF, BUSY_IF) between IC5206 (main microcomputer) and IC5002	None
Red			Blue 10		Fan	Failure in the fan motor, or the fan stopped because of dust attached to the fan	None
Red			Blue 11		MR or unit having abnormally high temperature	The Media Receiver or the unit being used at high temperature	Power off. Internal temperature is too high. Check temperature around media receiver. [SD011]
Red			Blue 12		Digital tuner	Defective DTV tuner *5	None
Red			Blue 13		ASIC power supply (DC-DC)	Defective U4201 (DD_CON) or short-circuiting elsewhere *6	None
Red 2		Red		PD	POWER	*2	None
Red 3		Red			SCAN	*2	None
Red 4		Red			SCN-5V	*2	None
Red 5		Red			Y-DRV	*2	None
Red 6		Red			Y-DCDC	*2	None
Red 7		Red			Y-SUS	*2	None
Red 8		Red			ADRS	*2	None
Red 9		Red			X-DRV	*2	None
Red 10		Red			X-DCDC	*2	None
Red 11		Red			X-SUS	*2	None
Red 12		Red			D-DCDC	*2	None
Red 13		Red			IC4	*2	None
Red 15		Red			UNKNOWN	*2	None

*1: Shutdown (SD) is a protective operation controlled by the microcomputer, and you can turn on the unit again using the remote control unit. Power-down (PD) is a protective operation activated by the circuitry and can be reset after AC power is off for about 1 minute.

*2: Refer to the service manual of the PDP-436PG or PDP-506PG.
*3: Only for US model.
*4: Only for J model.
*5: Only for US and J models.
*6: Only for one-body model.

7.2.2 POWER ON SEQUENCE



REM_B Descriptions in a call-out are signal names for reference.
For wiring numbers on the PDP side, refer to the service manual for the PDP.

① : The signal from the remote control unit (or a key signal) is input to the IF microcomputer.
② : The IF microcomputer supplies the power to the main microcomputer and MOD microcomputer.
③ : The IF microcomputer transmits operation data from the remote control unit (or keys) to the main microcomputer.
④ : The main microcomputer issues a startup command to the MOD microcomputer.
⑤ : The MOD microcomputer controls the relay of the PDP Power MOD and starts the power-on sequence of the PDP.
⑥ : The main microcomputer controls the relay of the MR Power MOD and starts the power-on sequence of the MR.

7.3 PARTS

7.3.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

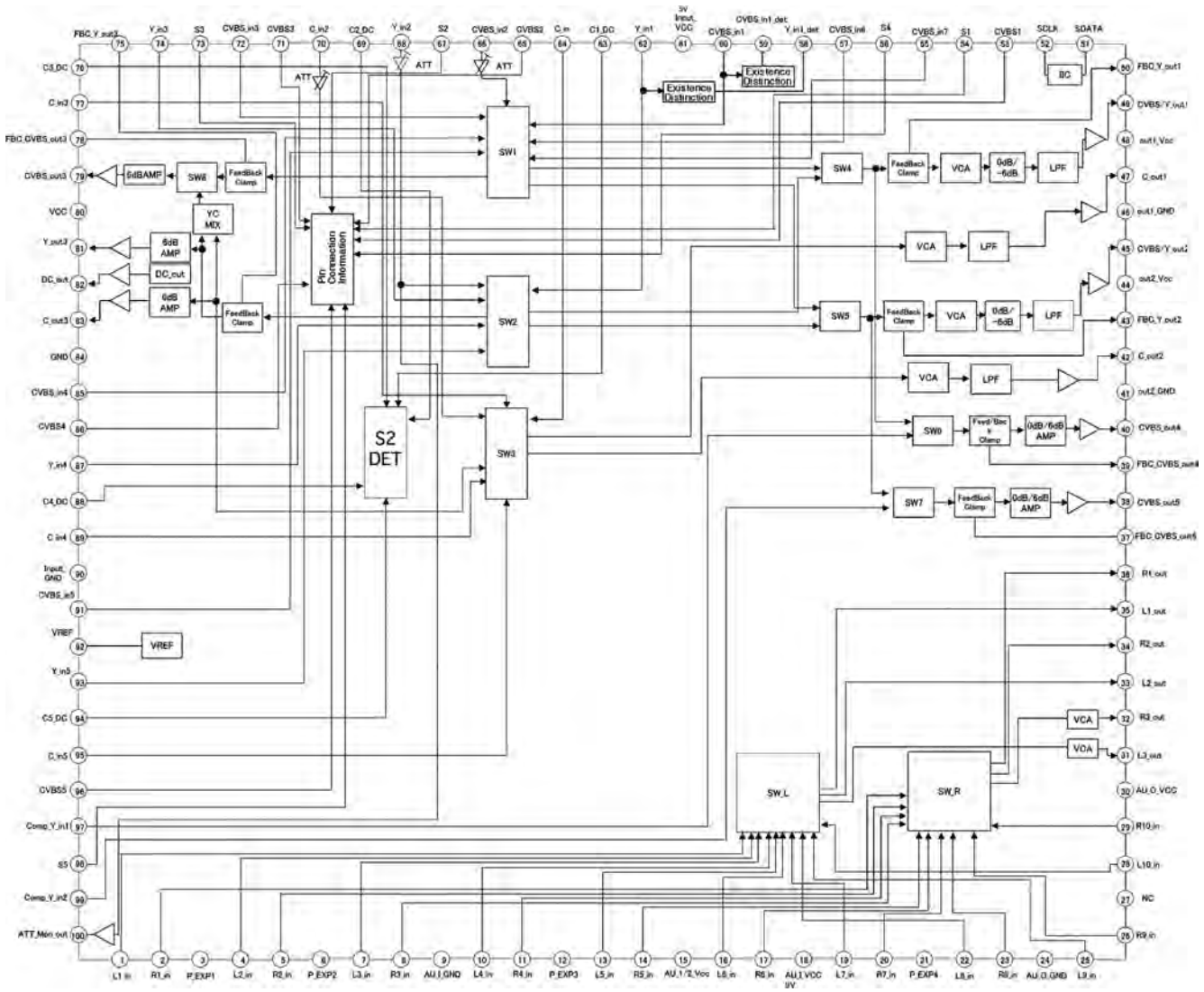
● **List of IC**

R2S11002AFT, R2S11001FT, K4S641632H-TC75, S29AL016D70TFI010, UPD64015GM-UEU, TVP5150AM1PBS, K4S161622H-TC60, AD9985KSTZ-110, SII9021CTU, K4S643232H-TC60, MBM29DL162TE70TN, SII170BCLG64, AXF1150, AXY1117

■ R2S11002AFT (MR MAIN ASSY: IC4804)

• AV SW

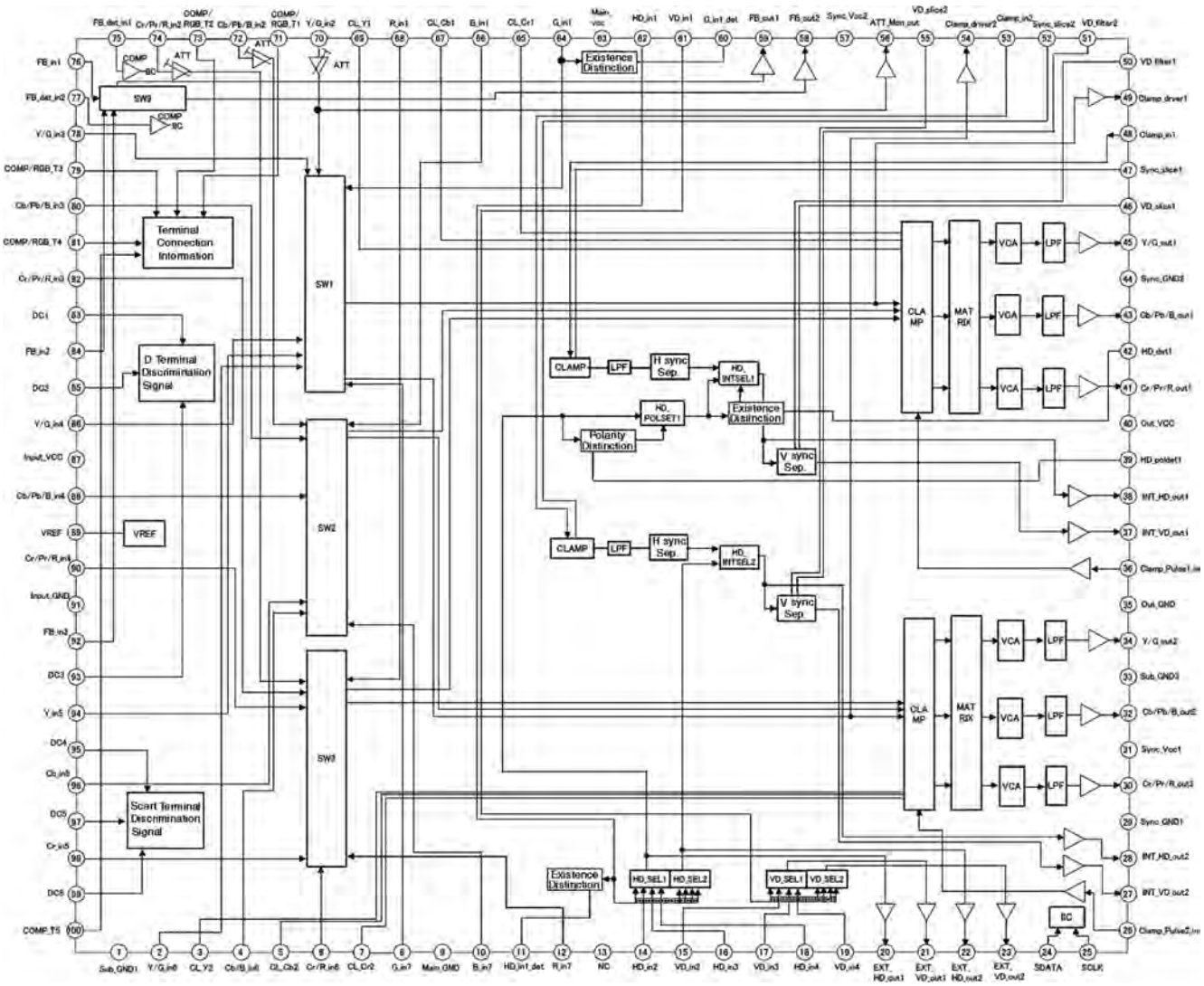
● **Block Diagram**



■ R2S11001FT (MR MAIN ASSY: IC4806)

• Component SW IC

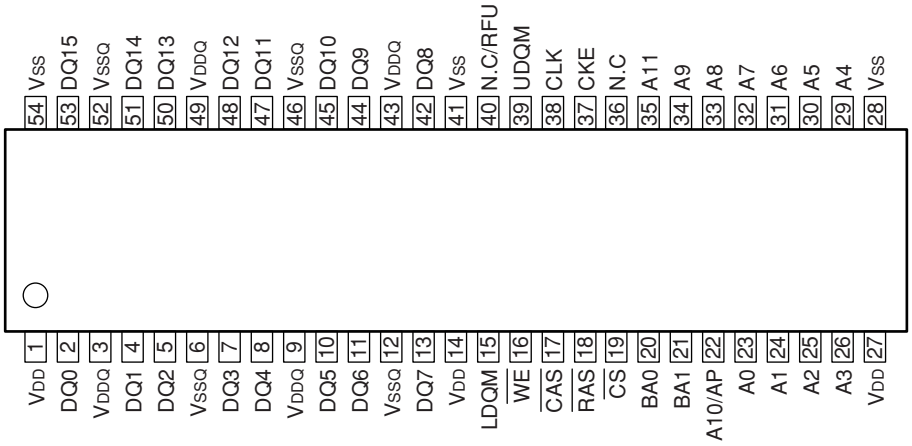
● Block Diagram



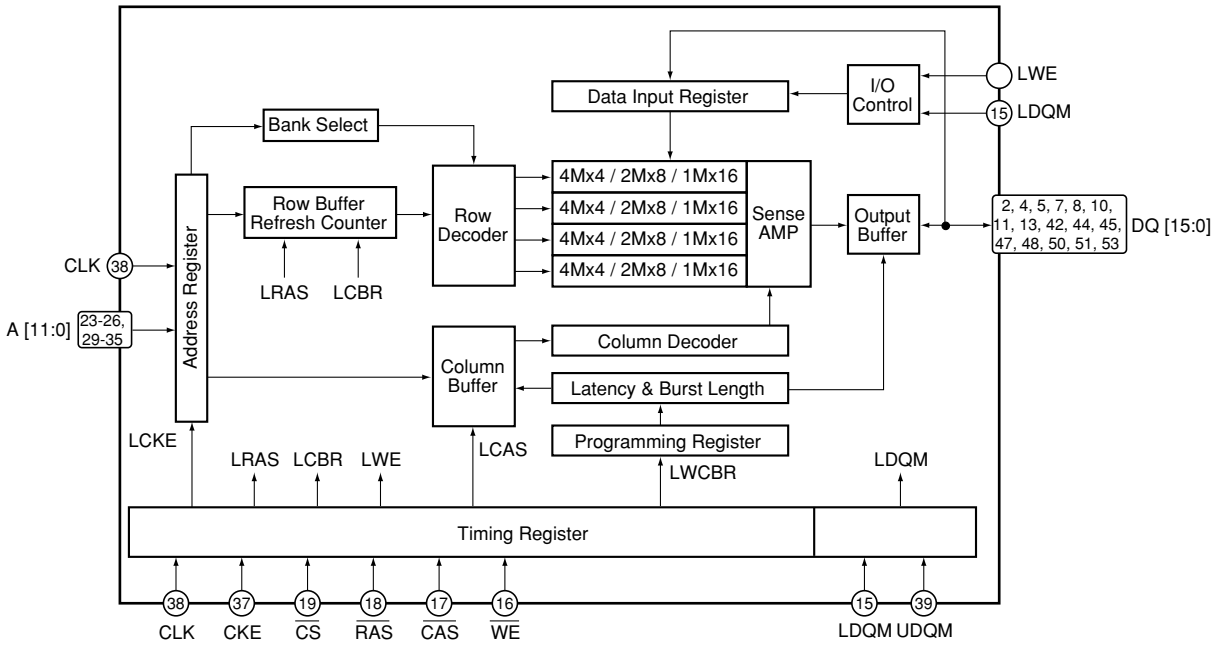
■ K4S641632H-TC75 (MR MAIN ASSY : IC5403)

• 64M SDRAM

● Pin Arrangement (Top view)



● Block Diagram



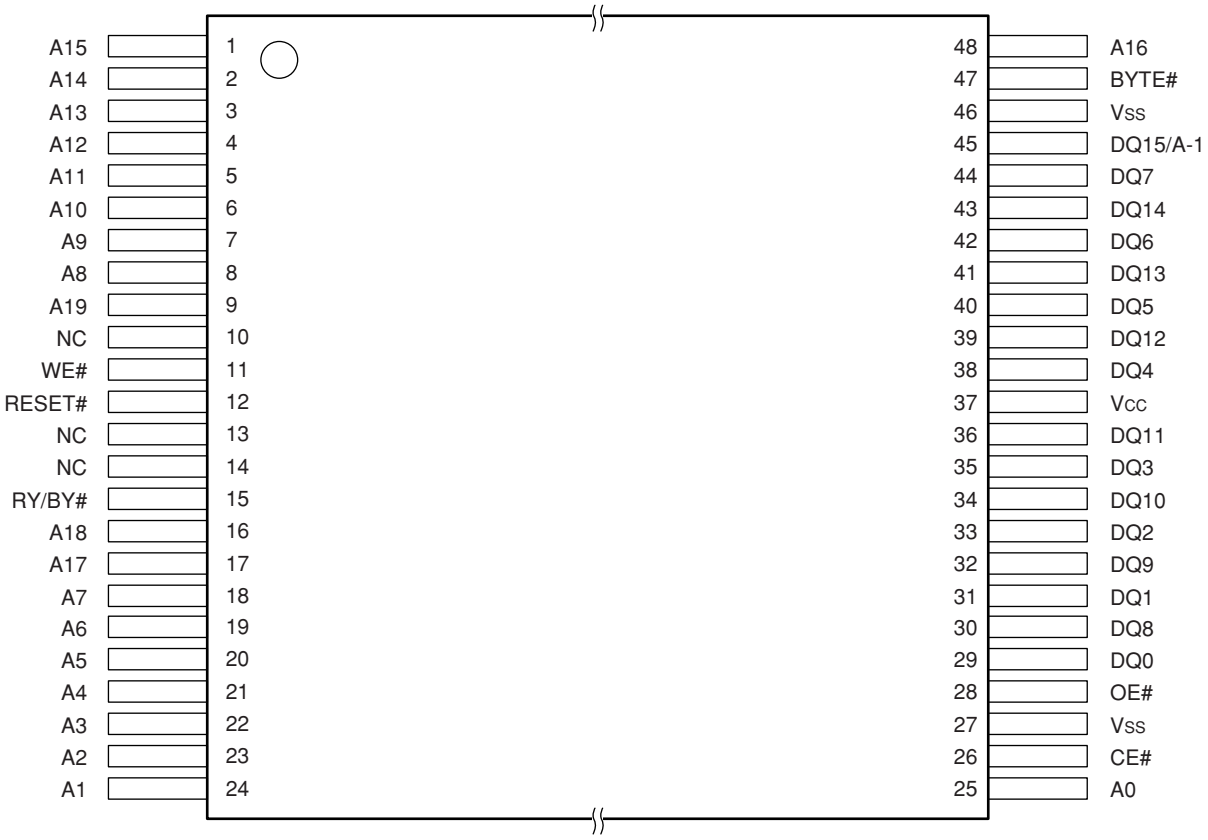
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	V_{DD}	–	Power supply	28	V_{SS}	–	Ground
2	DQ0	I/O	Data input/output	29	A4	I	Address input
3	V_{DDQ}	–	Power supply for data output	30	A5	I	Address input
4	DQ1	I/O	Data input/output	31	A6	I	Address input
5	DQ2	I/O	Data input/output	32	A7	I	Address input
6	V_{SSQ}	–	Ground for data output	33	A8	I	Address input
7	DQ3	I/O	Data input/output	34	A9	I	Address input
8	DQ4	I/O	Data input/output	35	A11	I	Address input
9	V_{DDQ}	–	Power supply for data output	36	N.C	–	No connection
10	DQ5	I/O	Data input/output	37	CKE	I	Clock enable input
11	DQ6	I/O	Data input/output	38	CLK	I	System clock input
12	V_{SSQ}	–	Ground for data output	39	UDQM	I	Data input/output mask
13	DQ7	I/O	Data input/output	40	N.C/RFU	–	No connection (Reserved for future use)
14	V_{DD}	–	Power supply	41	V_{SS}	–	Ground
15	LDQM	I	Data input/output mask	42	DQ8	I/O	Data input/output
16	$\overline{WE}$	I	Write enable input	43	V_{DDQ}	–	Power supply for data output
17	$\overline{CAS}$	I	Column address strobe input	44	DQ9	I/O	Data input/output
18	$\overline{RAS}$	I	Row address strobe input	45	DQ10	I/O	Data input/output
19	$\overline{CS}$	I	Chip select input	46	V_{SSQ}	–	Ground for data output
20	BA0	I	Bank select address input	47	DQ11	I/O	Data input/output
21	BA1	I	Bank select address input	48	DQ12	I/O	Data input/output
22	A10/AP	I	Address input	49	V_{DDQ}	–	Power supply for data output
23	A0	I	Address input	50	DQ13	I/O	Data input/output
24	A1	I	Address input	51	DQ14	I/O	Data input/output
25	A2	I	Address input	52	V_{SSQ}	–	Ground for data output
26	A3	I	Address input	53	DQ15	I/O	Data input/output
27	V_{DD}	–	Power supply	54	V_{SS}	–	Ground

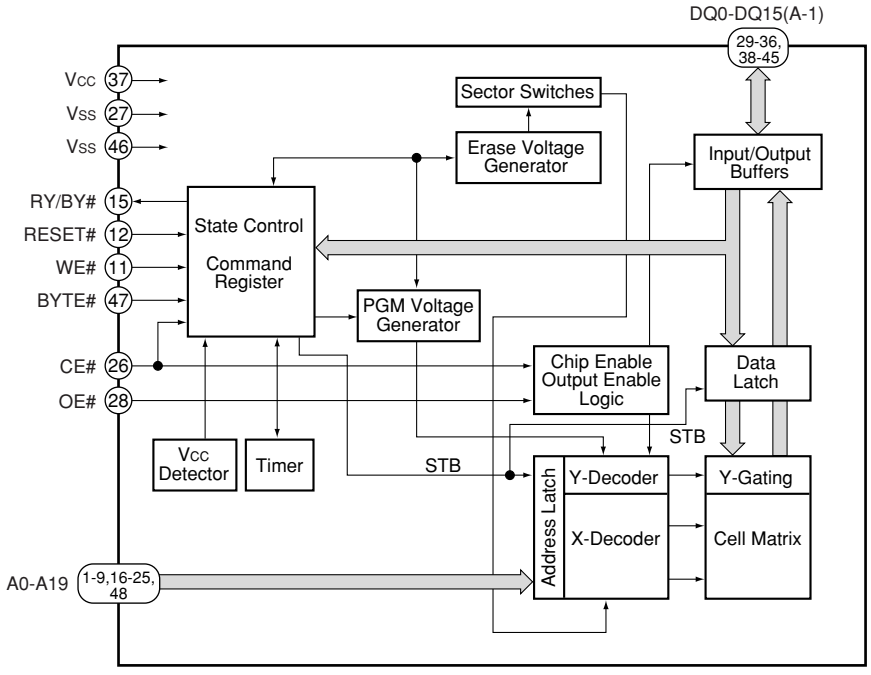
■ S29AL016D70TFI010 (MR MAIN ASSY : IC5404)

• 16M Flash Memory

● Pin Arrangement (Top view)



● Block Diagram



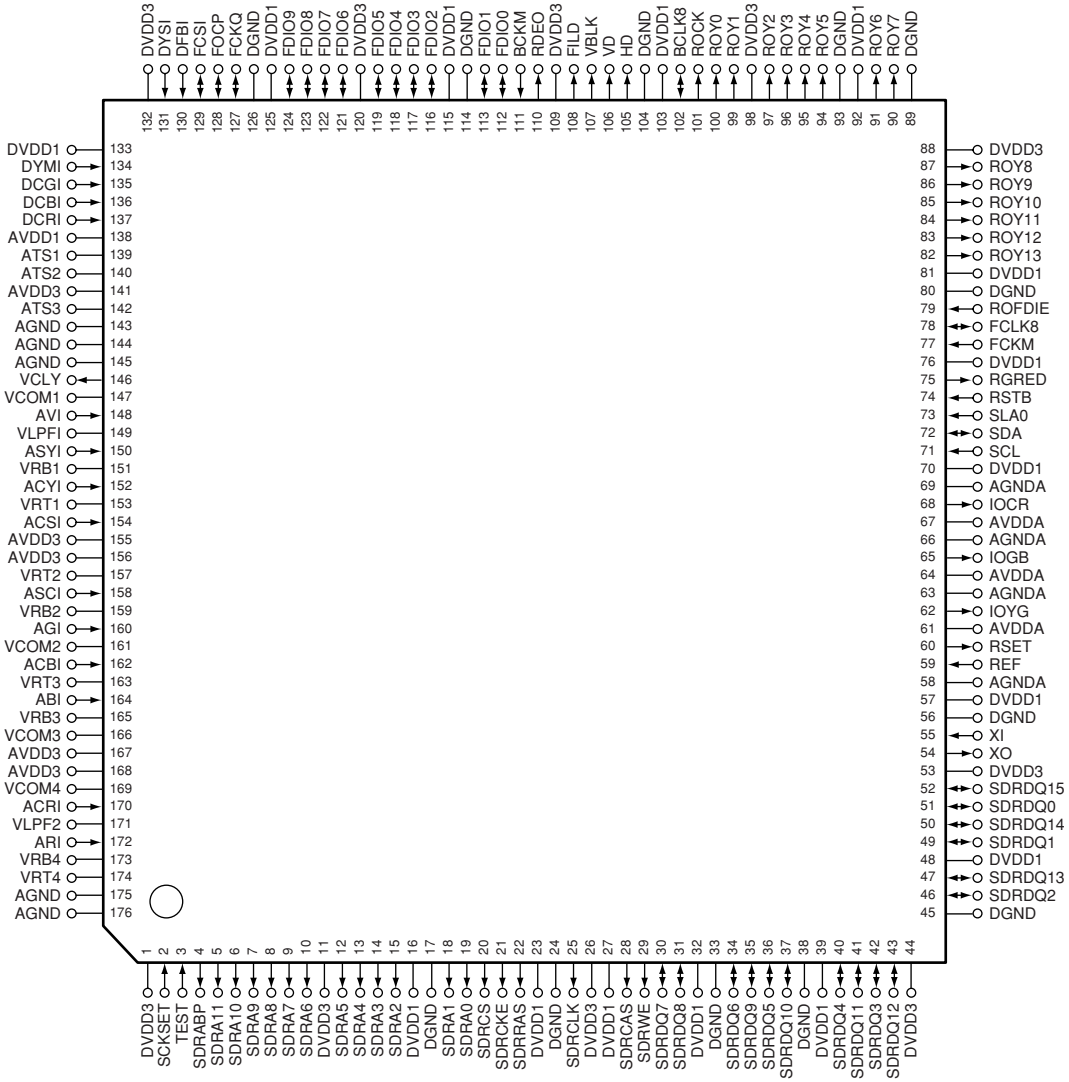
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	A15	I	Address input	25	A0	I	Address input
2	A14	I	Address input	26	CE#	I	Chip enable
3	A13	I	Address input	27	Vss	–	Device ground
4	A12	I	Address input	28	OE#	I	Output enable
5	A11	I	Address input	29	DQ0	I/O	Data input/output
6	A10	I	Address input	30	DQ8	I/O	Data input/output
7	A9	I	Address input	31	DQ1	I/O	Data input/output
8	A8	I	Address input	32	DQ9	I/O	Data input/output
9	A19	I	Address input	33	DQ2	I/O	Data input/output
10	NC	–	No connection	34	DQ10	I/O	Data input/output
11	WE#	I	Write enable	35	DQ3	I/O	Data input/output
12	RESET#	I	Hardware reset	36	DQ11	I/O	Data input/output
13	NC	–	No connection	37	Vcc	–	3V single power supply
14	NC	–	No connection	38	DQ4	I/O	Data input/output
15	RY/BY#	O	Ready/Busy output	39	DQ12	I/O	Data input/output
16	A18	I	Address input	40	DQ5	I/O	Data input/output
17	A17	I	Address input	41	DQ13	I/O	Data input/output
18	A7	I	Address input	42	DQ6	I/O	Data input/output
19	A6	I	Address input	43	DQ14	I/O	Data input/output
20	A5	I	Address input	44	DQ7	I/O	Data input/output
21	A4	I	Address input	45	DQ15/A-1	I/O	DQ15: Data input/output, word mode A-1: LSB address input, byte mode
22	A3	I	Address input	46	Vss	–	Device ground
23	A2	I	Address input	47	BYTE#	I	Selects 8-bit or 16-bit mode
24	A1	I	Address input	48	A16	I	Address input

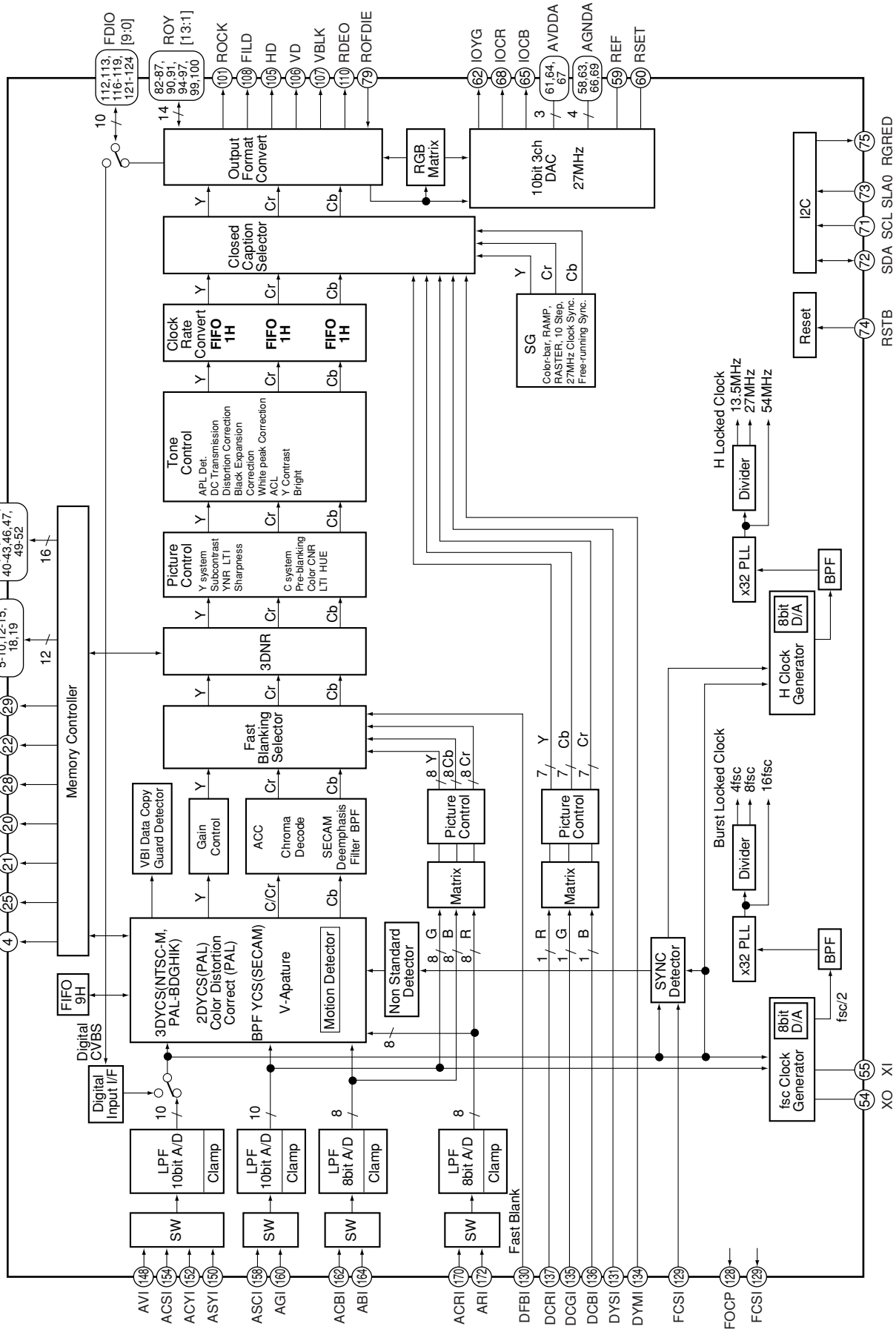
■ UPD64015GM-UEU (MR MAIN ASSY : IC6003)

• Video Decoder (for main screen)

● Pin Arrangement (Top view)



● Block Diagram



● **Pin Function**

No.	Pin Name	I/O	Pin Function
1	DVDD3	–	Digital power supply (3.3V)
2	SCKSET	I	Test mode selection (L: Normal, H: Test mode)
3	TEST	I	Test setting (L: Normal, H: Test mode)
4	SDRABP	O	All bank precharge output for external memory (Active High)
5	SDRA11	O	Address output for external memory
6	SDRA10	O	Address output for external memory
7	SDRA9	O	Address output for external memory
8	SDRA8	O	Address output for external memory
9	SDRA7	O	Address output for external memory
10	SDRA6	O	Address output for external memory
11	DVDD3	–	Digital power supply (3.3V)
12	SDRA5	O	Address output for external memory
13	SDRA4	O	Address output for external memory
14	SDRA3	O	Address output for external memory
15	SDRA2	O	Address output for external memory
16	DVDD1	–	Digital power supply (1.5V)
17	DGND	–	Digital ground
18	SDRA1	O	Address output for external memory
19	SDRA0	O	Address output for external memory
20	SDRCS	O	Chip select output for external memory (Active Low)
21	SDRCKE	O	Clock enable output for external memory (Active High)
22	SDRRAS	O	Row address strobe output for external memory (Active Low)
23	DVDD1	–	Digital power supply (1.5V)
24	DGND	–	Digital ground
25	SDRCLK	O	Clock output for external memory
26	DVDD3	–	Digital power supply (3.3V)
27	DVDD1	–	Digital power supply (1.5V)
28	SDRCAS	O	Column address strobe output for external memory (Active Low)
29	SDRWE	O	Write enable output for external memory (Active Low)
30	SDRDQ7	I/O	Data input/output for external memory
31	SDRDQ8	I/O	Data input/output for external memory
32	DVDD1	–	Digital power supply (1.5V)
33	DGND	–	Digital ground
34	SDRDQ6	I/O	Data input/output for external memory
35	SDRDQ9	I/O	Data input/output for external memory
36	SDRDQ5	I/O	Data input/output for external memory
37	SDRDQ10	I/O	Data input/output for external memory
38	DGND	–	Digital ground
39	DVDD1	–	Digital power supply (1.5V)
40	SDRDQ4	I/O	Data input/output for external memory
41	SDRDQ11	I/O	Data input/output for external memory
42	SDRDQ3	I/O	Data input/output for external memory
43	SDRDQ12	I/O	Data input/output for external memory
44	DVDD3	–	Digital power supply (3.3V)
45	DGND	–	Digital ground
46	SDRDQ2	I/O	Data input/output for external memory
47	SDRDQ13	I/O	Data input/output for external memory
48	DVDD1	–	Digital power supply (1.5V)
49	SDRDQ1	I/O	Data input/output for external memory
50	SDRDQ14	I/O	Data input/output for external memory

No.	Pin Name	I/O	Pin Function
51	SDRDQ0	I/O	Data input/output for external memory
52	SDRDQ15	I/O	Data input/output for external memory
53	DVDD3	–	Digital power supply (3.3V)
54	XO	O	Reference clock output Connect a 24.576MHz crystal.
55	XI	I	Reference clock input Connect a 24.576MHz crystal.
56	DGND	–	Digital ground
57	DVDD1	–	Digital power supply (1.5V)
58	AGNDA	–	Analog ground for DAC
59	REF	I	External reference input
60	RSET	O	Connect a 620 ohm resistor for external adjustment to AGND
61	AVDDA	–	Analog power supply for DAC (3.3V)
62	IOYG	O	Color-difference component Y / RGB component G output signal
63	AGNDA	–	Analog ground for DAC
64	AVDDA	–	Analog power supply for DAC (3.3V)
65	IOGB	O	Color-difference component Cb / RGB component B output signal
66	AGNDA	–	Analog ground for DAC
67	AVDDA	–	Analog power supply for DAC (3.3V)
68	IOCR	O	Color-difference component Cr / RGB component R output signal
69	AGNDA	–	Analog ground for DAC
70	DVDD1	–	Digital power supply (1.5V)
71	SCL	I	I^2C bus clock input Connect to SCL line of the system.
72	SDA	I/O	I^2C bus data input/output Connect to SDA line of the system.
73	SLA0	I	I^2C bus slave address select input (L: B8h/B9h, H: BAh/BBh)
74	RSTB	I	System reset input (Active Low)
75	RGRED	O	I^2C register read flag output (Active Low)
76	DVDD1	–	Digital power supply (1.5V)
77	FCKM	I	FCLK8 test mode selection (L: Normal, H: Test mode)
78	FCLK8	I/O	Line-lock clock monitor input/output
79	ROFDIE	I	Output enable of the video input/output terminal L: Output terminal Hi-Z, H: Output enable
80	DGND	–	Digital ground
81	DVDD1	–	Digital power supply (1.5V)
82	ROY13	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
83	ROY12	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
84	ROY11	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
85	ROY10	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
86	ROY9	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
87	ROY8	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
88	DVDD3	–	Digital power supply (3.3V)
89	DGND	–	Digital ground
90	ROY7	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
91	ROY6	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
92	DVDD1	–	Digital power supply (1.5V)
93	DGND	–	Digital ground
94	ROY5	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
95	ROY4	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
96	ROY3	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
97	ROY2	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
98	DVDD3	–	Digital power supply (3.3V)
99	ROY1	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
100	ROY0	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output

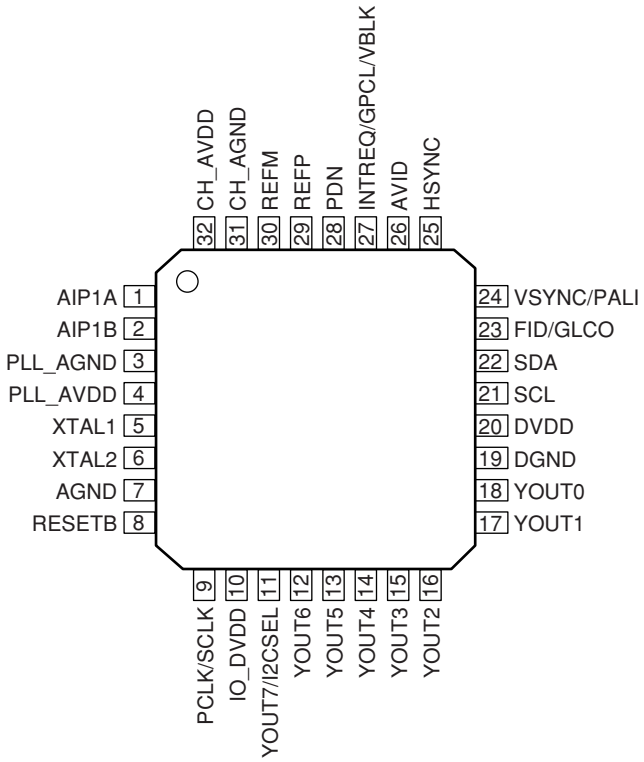
No.	Pin Name	I/O	Pin Function
101	ROCK	O	Clock for digital ITU-R BT. 656/component output
102	BCLK8	I/O	Line-lock clock monitor input/output
103	DVDD1	–	Digital power supply (1.5V)
104	DGND	–	Digital ground
105	HD	O	Horizontal sync. signal output
106	VD	O	Vertical sync. signal output
107	VBLK	O	V blanking output
108	FILD	O	Field output
109	DVDD3	–	Digital power supply (3.3V)
110	RDEO	O	Effective pixel area output
111	BCKM	I	Test mode selection of BCLK8 pin (L: Normal, H: Test mode)
112	FDIO0	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
113	FDIO1	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
114	DGND	–	Digital ground
115	DVDD1	–	Digital power supply (1.5V)
116	FDIO2	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
117	FDIO3	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
118	FDIO4	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
119	FDIO5	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
120	DVDD3	–	Digital power supply (3.3V)
121	FDIO6	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
122	FDIO7	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
123	FDIO8	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
124	FDIO9	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
125	DVDD1	–	Digital power supply (1.5V)
126	DGND	–	Digital ground
127	FCKQ	I/O	Sampling clock output for digital connection
128	FOCP	I/O	Clamp pulse output for digital connection / Timing output for digital RGB input (VD)
129	FCSI	I/O	Sync sep. signal input / Timing output for RGB input (HD)
130	DFBI	I	Fast blanking signal input for analog RGB input
131	DYSI	I	YS signal input for digital RGB input
132	DVDD3	–	Digital power supply (3.3V)
133	DVDD1	–	Digital power supply (1.5V)
134	DYMI	I	YM signal input for digital RGB input
135	DCGI	I	Digital RGB/G signal input
136	DCBI	I	Digital RGB/B signal input
137	DCRI	I	Digital RGB/R signal input
138	AVDD1	–	Analog power supply (1.5V)
139	ATS1	–	Analog test input Normally, connect to GND.
140	ATS2	–	Analog test input Normally, connect to GND.
141	AVDD3	–	Analog power supply (3.3V)
142	ATS3	–	Analog test input Normally, connect to GND.
143	AGND	–	Analog ground
144	AGND	–	Analog ground
145	AGND	–	Analog ground
146	VCLY	O	ADC1 clamp voltage
147	VCOM1	–	ADC1 common-mode reference voltage
148	AVI	I	ADC1 composite/Y signal input
149	VLPFI	–	Analog test output Connect to GND via 0.1μF capacitor.
150	ASYI	I	ADC1 composite/Y signal input

No.	Pin Name	I/O	Pin Function
151	VRB1	–	ADC1 bottom reference voltage
152	ACYI	I	ADC1 composite/Y signal input
153	VRT1	–	ADC1 top reference voltage
154	ACSI	I	ADC1 composite/Y signal input
155	AVDD3	–	Analog power supply for ADC (3.3V)
156	AVDD3	–	Analog power supply for ADC (3.3V)
157	VRT2	–	ADC2 top reference voltage
158	ASCI	I	ADC2 separate C signal input
159	VRB2	–	ADC2 bottom reference voltage
160	AGI	I	ADC2 RGB component G signal input
161	VCOM2	–	ADC2 common-mode reference voltage
162	ACBI	I	ADC3 color-difference component Cb signal input
163	VRT3	–	ADC3 top reference voltage
164	ABI	I	ADC3 RGB component B signal input
165	VRB3	–	ADC3 bottom reference voltage
166	VCOM3	–	ADC3 common-mode reference voltage
167	AVDD3	–	Analog power supply for ADC (3.3V)
168	AVDD3	–	Analog power supply for ADC (3.3V)
169	VCOM4	–	ADC4 common-mode reference voltage
170	ACRI	I	ADC4 color-difference component Cr signal input
171	VLPF2	–	Analog test output
172	ARI	I	ADC3 RGB component R signal input
173	VRB4	–	ADC4 bottom reference voltage
174	VRT4	–	ADC4 top reference voltage
175	AGND	–	Analog ground
176	AGND	–	Analog ground

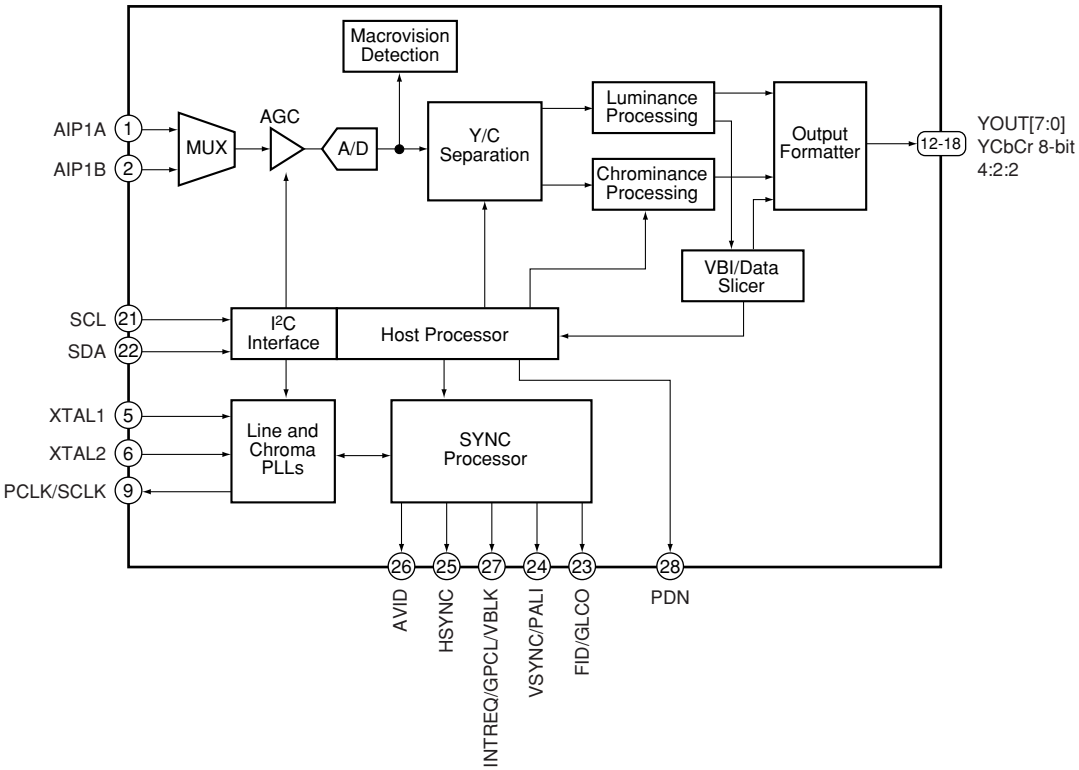
■ TVP5150AM1PBS (MR MAIN ASSY : IC6001)

• Video Decoder (for Subscreen)

● Pin Arrangement (Top view)



● Block Diagram



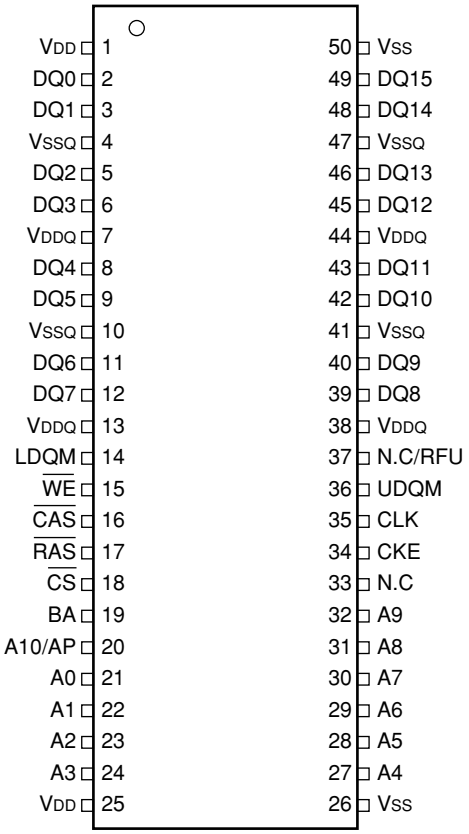
● **Pin Function**

No.	Pin Name	I/O	Pin Function
1	AIP1A	I	Analog input
2	AIP1B	I	Analog input
3	PLL_AGND	I	PLL ground Connect to analog ground.
4	PLL_AVDD	I	PLL power supply (1.8V)
5	XTAL1	I	External clock reference
6	XTAL2	O	External clock reference
7	AGND	I	Substrate Connect to analog ground.
8	RESETB	I	Active-low reset
9	PCLK/SCLK	O	System clock at either 1x or 2x the frequency of the pixel clock
10	IO_DVDD	I	Digital power supply (3.3V)
11	YOUT(7)/I2CSEL	I/O	I2CSEL: Determines address for I²C (sampled during reset) YOUT7: MSB of output decoded ITU-R BT.656 output/YCbCr 4:2:2 output
12	YOUT6	I/O	Output decoded ITU-R BT.656 output/YCbCr 4:2:2 output with discrete sync
13	YOUT5	I/O	Output decoded ITU-R BT.656 output/YCbCr 4:2:2 output with discrete sync
14	YOUT4	I/O	Output decoded ITU-R BT.656 output/YCbCr 4:2:2 output with discrete sync
15	YOUT3	I/O	Output decoded ITU-R BT.656 output/YCbCr 4:2:2 output with discrete sync
16	YOUT2	I/O	Output decoded ITU-R BT.656 output/YCbCr 4:2:2 output with discrete sync
17	YOUT1	I/O	Output decoded ITU-R BT.656 output/YCbCr 4:2:2 output with discrete sync
18	YOUT0	I/O	Output decoded ITU-R BT.656 output/YCbCr 4:2:2 output with discrete sync
19	DGND	I	Digital ground
20	DVDD	I	Digital power supply (1.8V)
21	SCL	I/O	I²C serial clock (open drain)
22	SDA	I/O	I²C serial data (open drain)
23	FID/GLCO	O	FID: Odd/even field indicator or vertical lock indicator GLCO: This serial output carries color PLL information
24	VSYNC/PALI	O	VSYNC: Vertical synchronization signal PALI: PAL line indicator or horizontal lock indicator
25	HSYNC	O	Horizontal synchronization signal
26	AVID	O	Active video indicator
27	INTREQ/GPCL /VBLK	I/O	INTREQ: Interrupt request output GPCL: General-purpose control logic
28	PDN	I	Power-down terminal (active low)
29	REFP	I	A/D reference supply
30	REFM	I	A/D reference ground
31	CH_AGND	I	Analog ground
32	CH_AVDD	I	Analog power supply (1.8V)

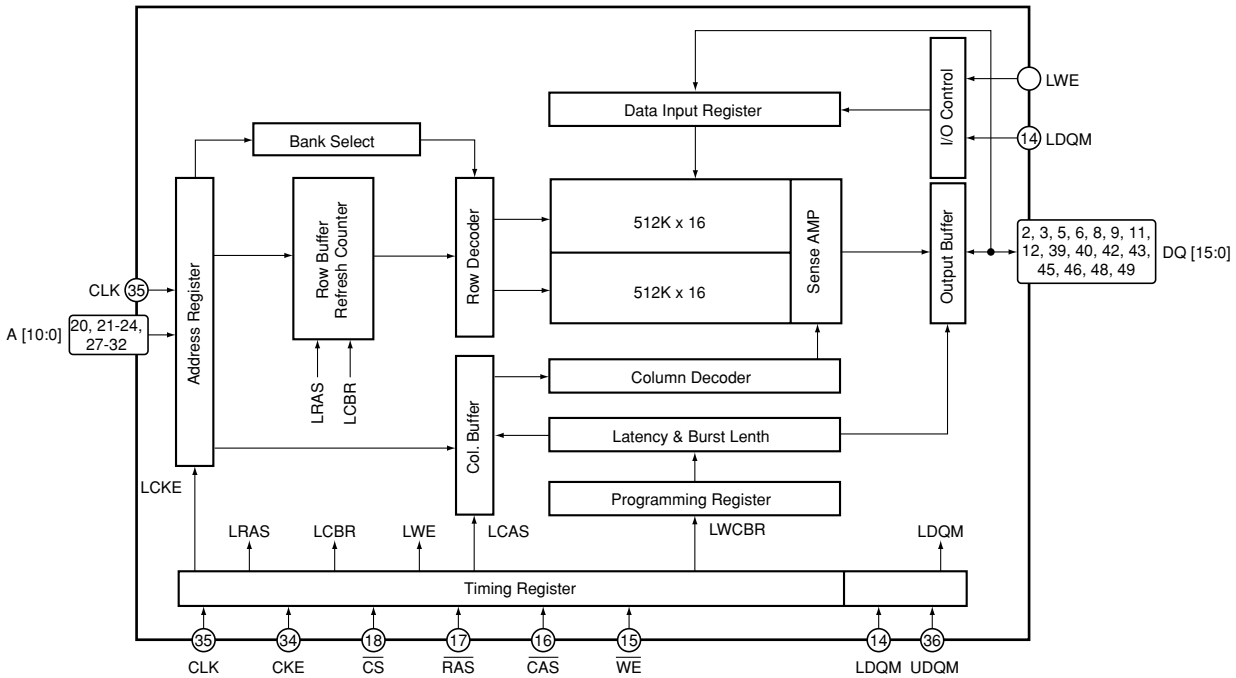
K4S161622H-TC60 (MR MAIN ASSY : IC6002)

• 16M SDRAM (for Main VDEC)

● Pin Arrangement (Top view)



● Block Diagram



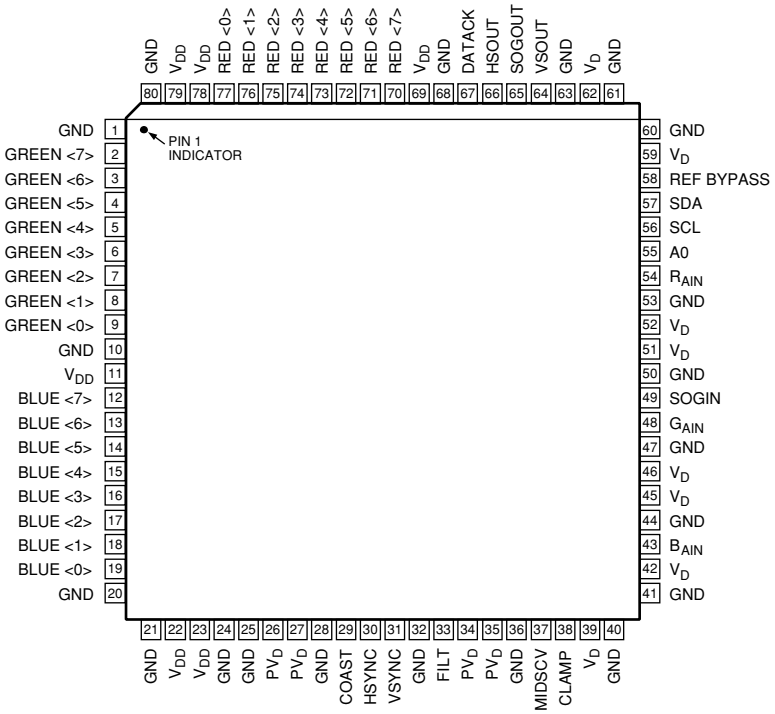
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	V_{DD}	–	Power supply	26	V_{SS}	–	Ground
2	DQ0	I/O	Data input / output	27	A4	I	Address input
3	DQ1	I/O	Data input / output	28	A5	I	Address input
4	V_{SSQ}	–	Ground for data output	29	A6	I	Address input
5	DQ2	I/O	Data input / output	30	A7	I	Address input
6	DQ3	I/O	Data input / output	31	A8	I	Address input
7	V_{DDQ}	–	Power supply for data output	32	A9	I	Address input
8	DQ4	I/O	Data input / output	33	N.C	–	No connection
9	DQ5	I/O	Data input / output	34	CKE	I	Clock enable input
10	V_{SSQ}	–	Ground for data output	35	CLK	I	System clock input
11	DQ6	I/O	Data input / output	36	UDQM	I	Data input / output mask input
12	DQ7	I/O	Data input / output	37	N.C/RFU	–	No connection / Reserved for future use
13	V_{DDQ}	–	Power supply for data output	38	V_{DDQ}	–	Power supply for data output
14	LDQM	I	Data input / output mask input	39	DQ8	I/O	Data input / output
15	$\overline{WE}$	I	Write enable input	40	DQ9	I/O	Data input / output
16	$\overline{CAS}$	I	Column address strobe input	41	V_{SSQ}	–	Ground for data output
17	$\overline{RAS}$	I	Row address strobe input	42	DQ10	I/O	Data input / output
18	$\overline{CS}$	I	Chip select input	43	DQ11	I/O	Data input / output
19	BA	I	Bank select address input	44	V_{DDQ}	–	Power supply for data output
20	A10/AP	I	Address input	45	DQ12	I/O	Data input / output
21	A0	I	Address input	46	DQ13	I/O	Data input / output
22	A1	I	Address input	47	V_{SSQ}	–	Ground for data output
23	A2	I	Address input	48	DQ14	I/O	Data input / output
24	A3	I	Address input	49	DQ15	I/O	Data input / output
25	V_{DD}	–	Power supply	50	V_{SS}	–	Ground

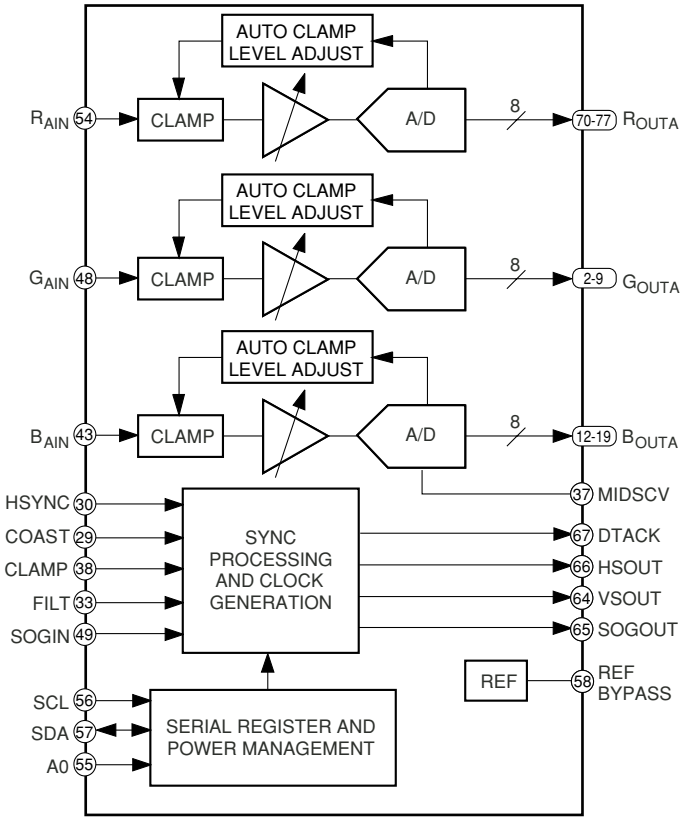
AD9985KSTZ-110 (MR MAIN ASSY : IC6201)

• ADC

● Pin Arrangement (Top view)



● Block Diagram



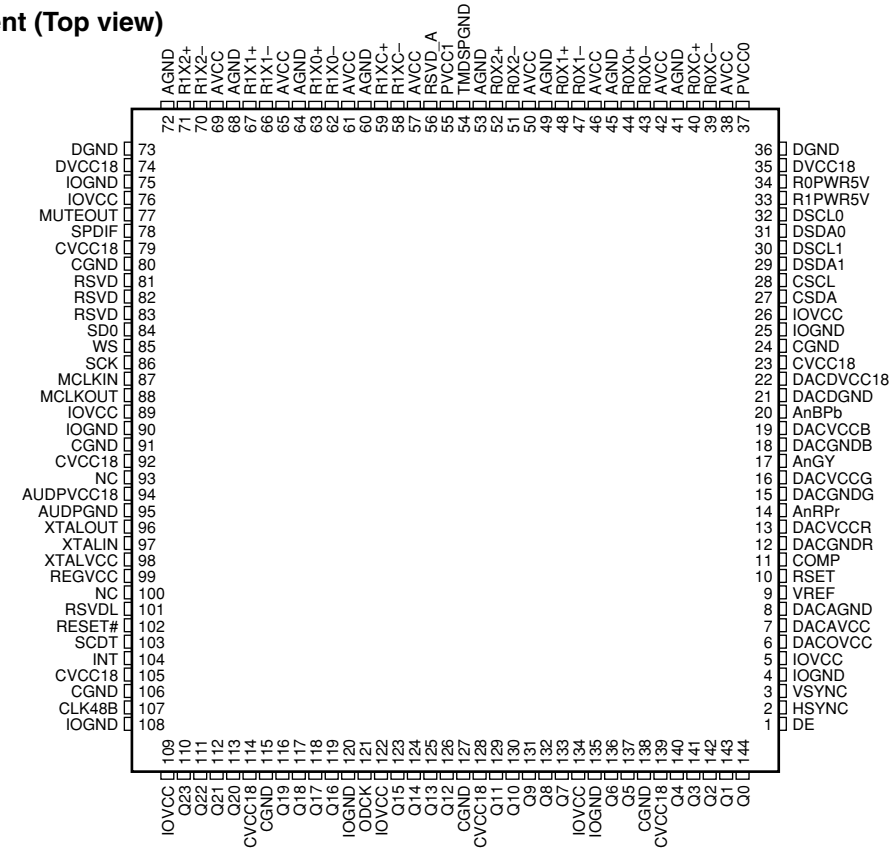
● Pin Function

Pin Type	No.	PIN Name	Pin Function
Inputs	54	RAIN	Analog input for converter R
	48	GAIN	Analog input for converter G
	43	BAIN	Analog input for converter B
	30	HSYNC	Horizontal sync input
	31	VSYNC	Vertical sync input
	49	SOGIN	Input for sync-on green
	38	CLAMP	Clamp input (External CLAMP signal)
	29	COAST	PLL COAST signal input
Outputs	70-77	Red [7 : 0]	Outputs of converter red, bit 7 is the MSB
	2-9	Green [7 : 0]	Outputs of converter green, bit 7 is the MSB
	12-19	Blue [7 : 0]	Outputs of converter blue, bit 7 is the MSB
	67	DATACK	Data output clock
	66	HSOUT	HSYNC output (Phase-aligned with DATACK)
	64	VSOUT	VSYNC output (Phase-aligned with DATACK)
	65	SOGOUT	Sync-on-green slicer output
Reference	58	REF BYPASS	Internal reference bypass
	37	MIDSCV	Internal midscale voltage bypass
	33	FILT	Connection for external filter components for internal PLL
Power Supply	39, 42, 45, 46, 51, 52, 59, 62	VD	Analog power supply
	11, 22, 23, 69, 78, 79	VDD	Output power supply
	26, 27, 34, 35	PVD	PLL power supply
	1, 10, 20, 21, 24, 25, 28, 32, 36, 40, 41, 44, 47, 50, 53, 60, 61, 63 68, 80	GND	Ground
Control	57	SDA	Serial port data I/O
	56	SCL	Serial port data clock (100 kHz maximum)
	55	A0	Serial port address input 1

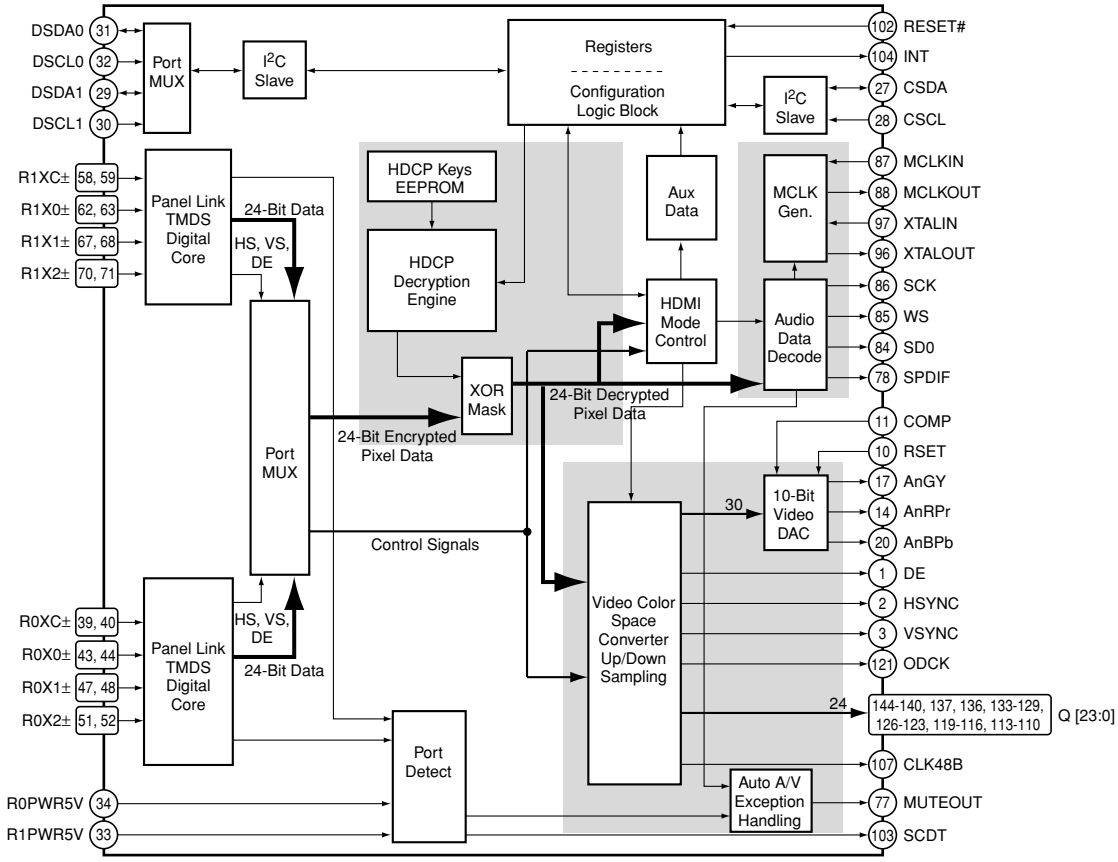
SII9021CTU (MR MAIN ASSY : IC6404)

• HDMI Rx

● Pin Arrangement (Top view)



● Block Diagram



A

● Pin Function

No.	Pin Name	I/O	Pin Function
1	DE	O	Data enable
2	HSYNC	O	Horizontal sync output control signal
3	VSYNC	O	Vertical sync output control signal
4	IOGND	–	Input / output pin ground
5	IOVCC	–	Input / output pin VCC
6	DACOVCC	–	DAC output VCC
7	DACAVCC	–	DAC analog VCC
8	DACAGND	–	DAC analog ground
9	VREF	–	–
10	RSET	–	Full scale adjust resistor
11	COMP	–	Compensation
12	DACGNDR	–	DAC red ground
13	DACVCCR	–	DAC red VDD
14	AnRPr	O	Analog video red, Pr output
15	DACGNDG	–	DAC green ground
16	DACVCCG	–	DAC green VDD
17	AnGY	O	Analog video green, Y output
18	DACGNDB	–	DAC blue ground
19	DACVCCB	–	DAC blue VDD
20	AnBPb	O	Analog video blue, Pb output
21	DACDGND	–	DAC digital ground
22	DACDVCC18	–	DAC digital VCC
23	CVCC18	–	Digital logic VCC
24	CGND	–	Digital logic ground
25	IOGND	–	Input / output pin ground
26	IOVCC	–	Input / output pin VCC
27	CSDA	I/O	Configuration I^2C data
28	CSCL	I	Configuration I^2C clock
29	DSDA1	I/O	DDC I^2C data for port 1
30	DSCL1	I	DDC I^2C clock for port 1
31	DSDA0	I/O	DDC I^2C data for port 0
32	DSCL0	I	DDC I^2C clock for port 0
33	R1PWR5V	I	Port 1 transmitter detect
34	R0PWR5V	I	Port 0 transmitter detect
35	DVCC18	–	ACR PLL digital VCC
36	DGND	–	ACR PLL ground
37	PVCC0	–	TMDS port 0 PLL VCC
38	AVCC	–	TMDS analog VCC
39	R0XC–	I	TMDS input clock
40	R0XC+	I	TMDS input clock
41	AGND	–	TMDS analog ground
42	AVCC	–	TMDS analog VCC
43	R0X0–	I	TMDS input data
44	R0X0+	I	TMDS input data
45	AGND	–	TMDS analog ground
46	AVCC	–	TMDS analog VCC
47	R0X1–	I	TMDS input data
48	R0X1+	I	TMDS input data
49	AGND	–	TMDS analog ground
50	AVCC	–	TMDS analog VCC

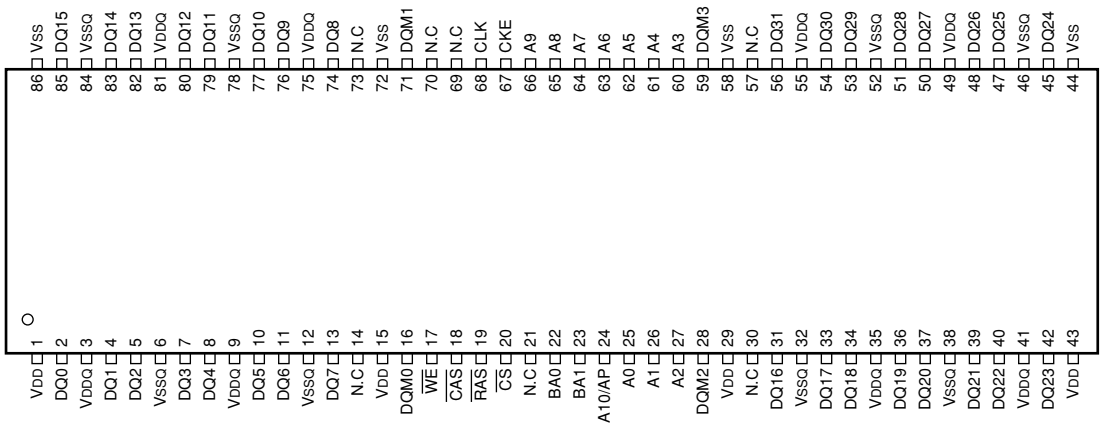
No.	Pin Name	I/O	Pin Function
51	R0X2–	I	TMDS input data
52	R0X2+	I	TMDS input data
53	AGND	–	TMDS analog ground
54	TMDSPGND	–	TMDS PLL ground
55	PVCC1	–	TMDS port 1 PLL VCC
56	RSVD_A	–	Reserved pin
57	AVCC	–	TMDS analog VCC
58	R1XC–	I	TMDS input clock
59	R1XC+	I	TMDS input clock
60	AGND	–	TMDS analog ground
61	AVCC	–	TMDS analog VCC
62	R1X0–	I	TMDS input data
63	R1X0+	I	TMDS input data
64	AGND	–	TMDS analog ground
65	AVCC	–	TMDS analog VCC
66	R1X1–	I	TMDS input data
67	R1X1+	I	TMDS input data
68	AGND	–	TMDS analog ground
69	AVCC	–	TMDS analog VCC
70	R1X2–	I	TMDS input data
71	R1X2+	I	TMDS input data
72	AGND	–	TMDS analog ground
73	DGND	–	ACR PLL ground
74	DVCC18	–	ACR PLL digital VCC
75	IOGND	–	Input / output pin ground
76	IOVCC	–	Input / output pin VCC
77	MUTEOUT	O	Mute audio output
78	SPDIF	O	S/PDIF audio output
79	CVCC18	–	Digital logic VCC
80	CGND	–	Digital logic ground
81	RSVD	O	–
82	RSVD	O	–
83	RSVD	O	–
84	SD0	O	I^2S serial data output
85	WS	O	I^2S word select output
86	SCK	O	I^2S serial clock output
87	MCLKIN	I	Audio master clock input reference
88	MCLKOUT	O	Audio master clock output
89	IOVCC	–	Input / output pin VCC
90	IOGND	–	Input / output pin ground
91	CGND	–	Digital logic ground
92	CVCC18	–	Digital logic VCC
93	NC	–	No connection
94	AUDPVCC18	–	ACR PLL VCC
95	AUDPGND	–	ACR PLL ground
96	XTALOUT	O	Crystal clock output
97	XTALIN	I	Crystal clock input
98	XTALVCC	–	ACR PLL crystal input VCC
99	REGVCC	–	ACR PLL regulator VCC
100	NC	–	No connection

No.	Pin Name	I/O	Pin Function
101	RSVDL	I	Reserved, must be tied LOW
102	RESET#	I	Reset pin, active LOW
103	SCDT	O	Indicates active video at HDMI input port
104	INT	O	Interrupt output
105	CVCC18	–	Digital logic VCC
106	CGND	–	Digital logic ground
107	CLK48B	I/O	Data bus latch enable
108	IOGND	–	Input / output pin ground
109	IOVCC	–	Input / output pin VCC
110	Q23	O	24-bit output pixel data bus
111	Q22	O	24-bit output pixel data bus
112	Q21	O	24-bit output pixel data bus
113	Q20	O	24-bit output pixel data bus
114	CVCC18	–	Digital logic VCC
115	CGND	–	Digital logic ground
116	Q19	O	24-bit output pixel data bus
117	Q18	O	24-bit output pixel data bus
118	Q17	O	24-bit output pixel data bus
119	Q16	O	24-bit output pixel data bus
120	IOGND	–	Input / output pin ground
121	ODCK	O	Output data clock
122	IOVCC	–	Input / output pin VCC
123	Q15	O	24-bit output pixel data bus
124	Q14	O	24-bit output pixel data bus
125	Q13	O	24-bit output pixel data bus
126	Q12	O	24-bit output pixel data bus
127	CGND	–	Digital logic ground
128	CVCC18	–	Digital logic VCC
129	Q11	O	24-bit output pixel data bus
130	Q10	O	24-bit output pixel data bus
131	Q9	O	24-bit output pixel data bus
132	Q8	O	24-bit output pixel data bus
133	Q7	O	24-bit output pixel data bus
134	IOVCC	–	Input / output pin VCC
135	IOGND	–	Input / output pin ground
136	Q6	O	24-bit output pixel data bus
137	Q5	O	24-bit output pixel data bus
138	CGND	–	Digital logic ground
139	CVCC18	–	Digital logic VCC
140	Q4	O	24-bit output pixel data bus
141	Q3	O	24-bit output pixel data bus
142	Q2	O	24-bit output pixel data bus
143	Q1	O	24-bit output pixel data bus
144	Q0	O	24-bit output pixel data bus

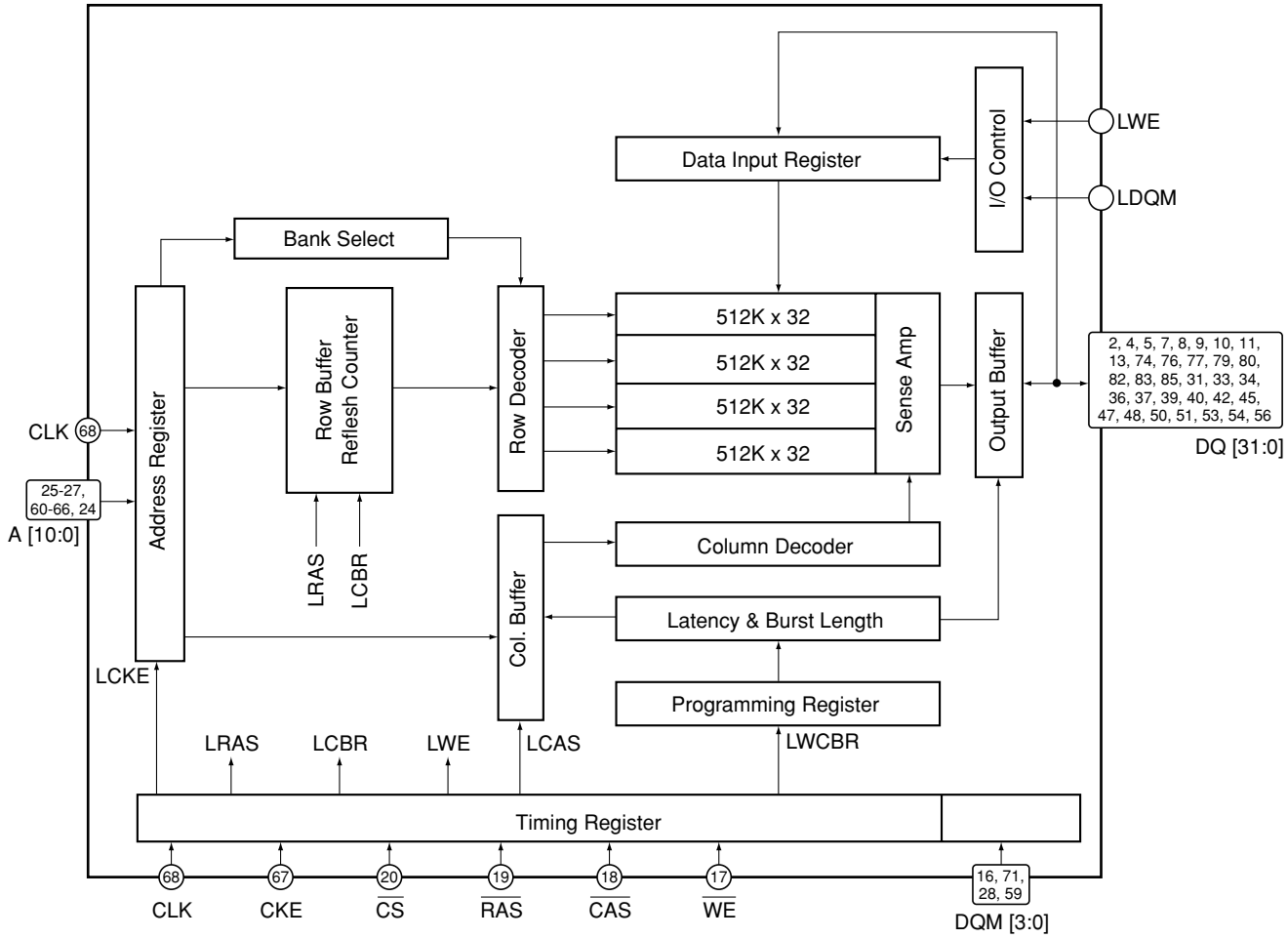
K4S643232H-TC60 (MR MAIN ASSY : IC6801, IC6802)

• 64M SDRAM (for Silvia)

● Pin Arrangement (Top view)



● Block Diagram



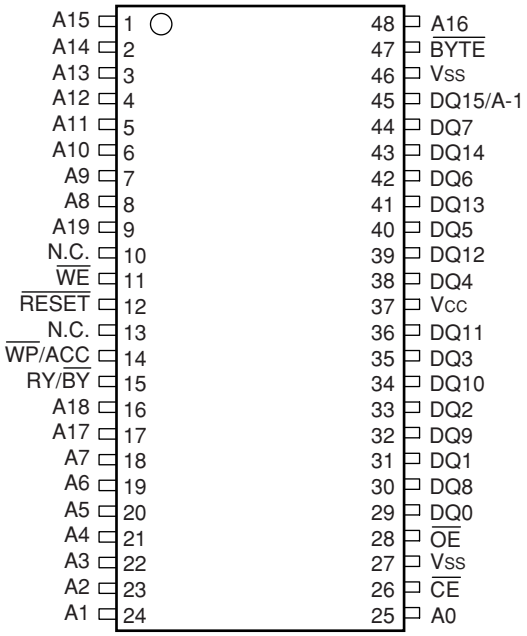
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	V_{DD}	–	Power supply	44	V_{SS}	–	Ground
2	DQ0	I/O	Data input / output	45	DQ24	I/O	Data input / output
3	V_{DDQ}	–	Power supply for data output	46	V_{SSQ}	–	Ground for data output
4	DQ1	I/O	Data input / output	47	DQ25	I/O	Data input / output
5	DQ2	I/O	Data input / output	48	DQ26	I/O	Data input / output
6	V_{SSQ}	–	Ground for data output	49	V_{DDQ}	–	Power supply for data output
7	DQ3	I/O	Data input / output	50	DQ27	I/O	Data input / output
8	DQ4	I/O	Data input / output	51	DQ28	I/O	Data input / output
9	V_{DDQ}	–	Power supply for data output	52	V_{SSQ}	–	Ground for data output
10	DQ5	I/O	Data input / output	53	DQ29	I/O	Data input / output
11	DQ6	I/O	Data input / output	54	DQ30	I/O	Data input / output
12	V_{SSQ}	–	Ground for data output	55	V_{DDQ}	–	Power supply for data output
13	DQ7	I/O	Data input / output	56	DQ31	I/O	Data input / output
14	N.C	–	No connection	57	N.C	–	No connection
15	V_{DD}	–	Power supply	58	V_{SS}	–	Ground
16	DQM0	I	Data input / output mask input	59	DQM3	I	Data input / output mask input
17	$\overline{WE}$	I	Write enable input	60	A3	I	Address input
18	$\overline{CAS}$	I	Column address strobe input	61	A4	I	Address input
19	$\overline{RAS}$	I	Row address strobe input	62	A5	I	Address input
20	$\overline{CS}$	I	Chip select input	63	A6	I	Address input
21	N.C	–	No connection	64	A7	I	Address input
22	BA0	I	Bank select address input	65	A8	I	Address input
23	BA1	I	Bank select address input	66	A9	I	Address input
24	A10/AP	I	Address input	67	CKE	I	Clock enable input
25	A0	I	Address input	68	CLK	I	System clock input
26	A1	I	Address input	69	N.C	–	No connection
27	A2	I	Address input	70	N.C	–	No connection
28	DQM2	I	Data input / output mask input	71	DQM1	I	Data input / output mask input
29	V_{DD}	–	Power supply	72	V_{SS}	–	Ground
30	N.C	–	No connection	73	N.C	–	No connection
31	DQ16	I/O	Data input / output	74	DQ8	I/O	Data input / output
32	V_{SSQ}	–	Ground for data output	75	V_{DDQ}	–	Power supply for data output
33	DQ17	I/O	Data input / output	76	DQ9	I/O	Data input / output
34	DQ18	I/O	Data input / output	77	DQ10	I/O	Data input / output
35	V_{DDQ}	–	Power supply for data output	78	V_{SSQ}	–	Ground for data output
36	DQ19	I/O	Data input / output	79	DQ11	I/O	Data input / output
37	DQ20	I/O	Data input / output	80	DQ12	I/O	Data input / output
38	V_{SSQ}	–	Ground for data output	81	V_{DDQ}	–	Power supply for data output
39	DQ21	I/O	Data input / output	82	DQ13	I/O	Data input / output
40	DQ22	I/O	Data input / output	83	DQ14	I/O	Data input / output
41	V_{DDQ}	–	Power supply for data output	84	V_{SSQ}	–	Ground for data output
42	DQ23	I/O	Data input / output	85	DQ15	I/O	Data input / output
43	V_{DD}	–	Power supply	86	V_{SS}	–	Ground

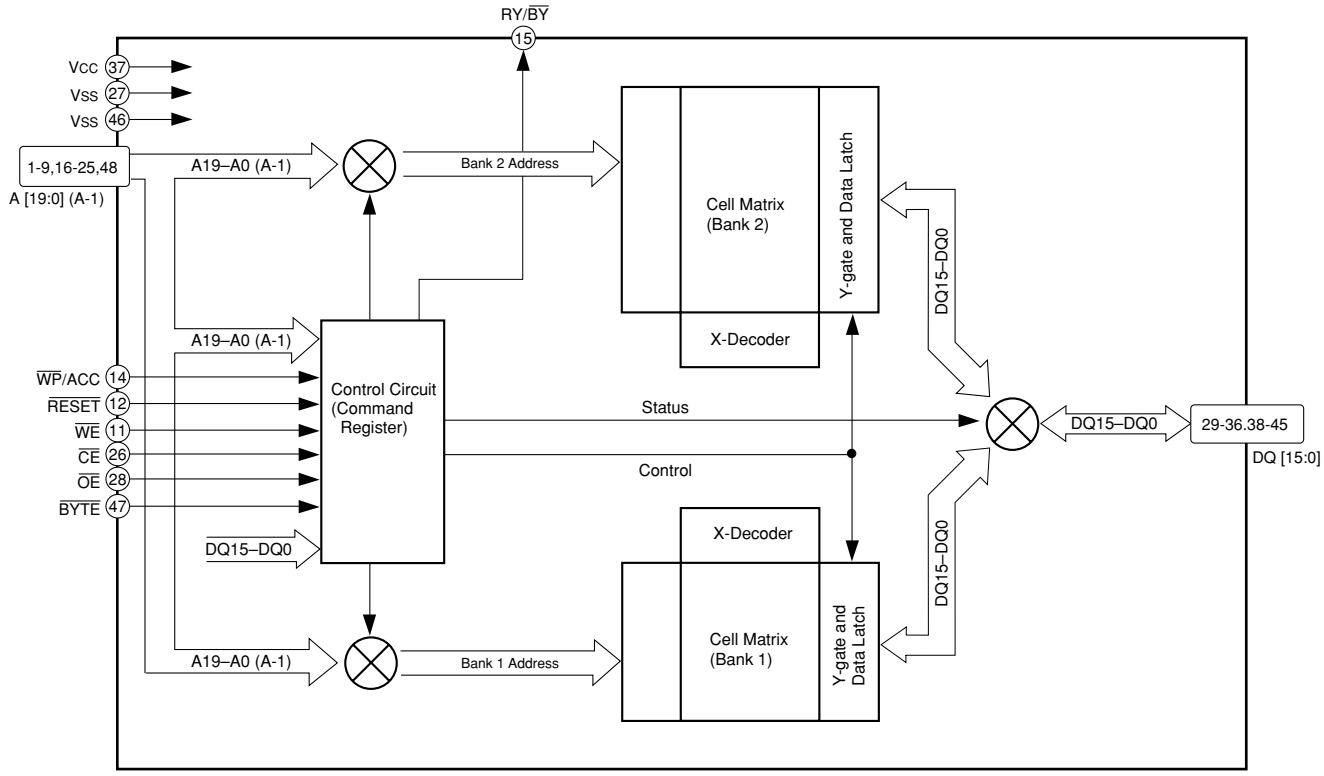
MBM29DL162TE70TN (MR MAIN ASSY : IC5207, IC7002)

• 16M Flash for Carrera MANTA

● Pin Arrangement (Top view)



● Block Diagram



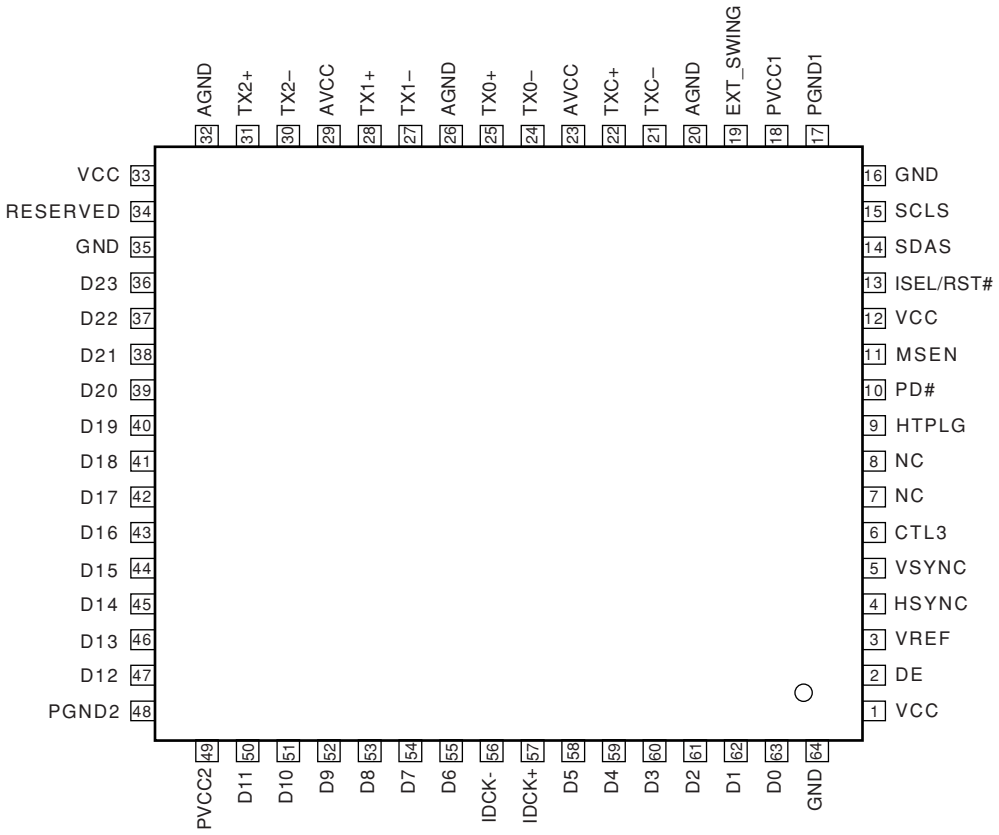
● Pin Function

No.	Pin Name	I/O	Pin Function
1	A15	I	Address input
2	A14	I	Address input
3	A13	I	Address input
4	A12	I	Address input
5	A11	I	Address input
6	A10	I	Address input
7	A9	I	Address input
8	A8	I	Address input
9	A19	I	Address input
10	N.C.	I	No connection
11	$\overline{WE}$	I	Write enable input
12	$\overline{RESET}$	I	Hardware reset
13	N.C.	–	No connection
14	$\overline{WP}$/ACC	I	Hardware write protect / Acceleration
15	RY/$\overline{BY}$	O	Ready / Busy output
16	A18	I	Address input
17	A17	I	Address input
18	A7	I	Address input
19	A6	I	Address input
20	A5	I	Address input
21	A4	I	Address input
22	A3	I	Address input
23	A2	I	Address input
24	A1	I	Address input
25	A0	I	Address input
26	$\overline{CE}$	I	Chip enable input
27	Vss	–	Ground
28	$\overline{OE}$	I	Output enable input
29	DQ0	I/O	Data input / output
30	DQ8	I/O	Data input / output
31	DQ1	I/O	Data input / output
32	DQ9	I/O	Data input / output
33	DQ2	I/O	Data input / output
34	DQ10	I/O	Data input / output
35	DQ3	I/O	Data input / output
36	DQ11	I/O	Data input / output
37	Vcc	–	Power supply
38	DQ4	I/O	Data input / output
39	DQ12	I/O	Data input / output
40	DQ5	I/O	Data input / output
41	DQ13	I/O	Data input / output
42	DQ6	I/O	Data input / output
43	DQ14	I/O	Data input / output
44	DQ7	I/O	Data input / output
45	DQ15/A-1	I/O	Data input / output / Address input
46	Vss	–	Ground
47	$\overline{BYTE}$	I	Selects 8-bit or 16-bit mode
48	A16	I	Address input

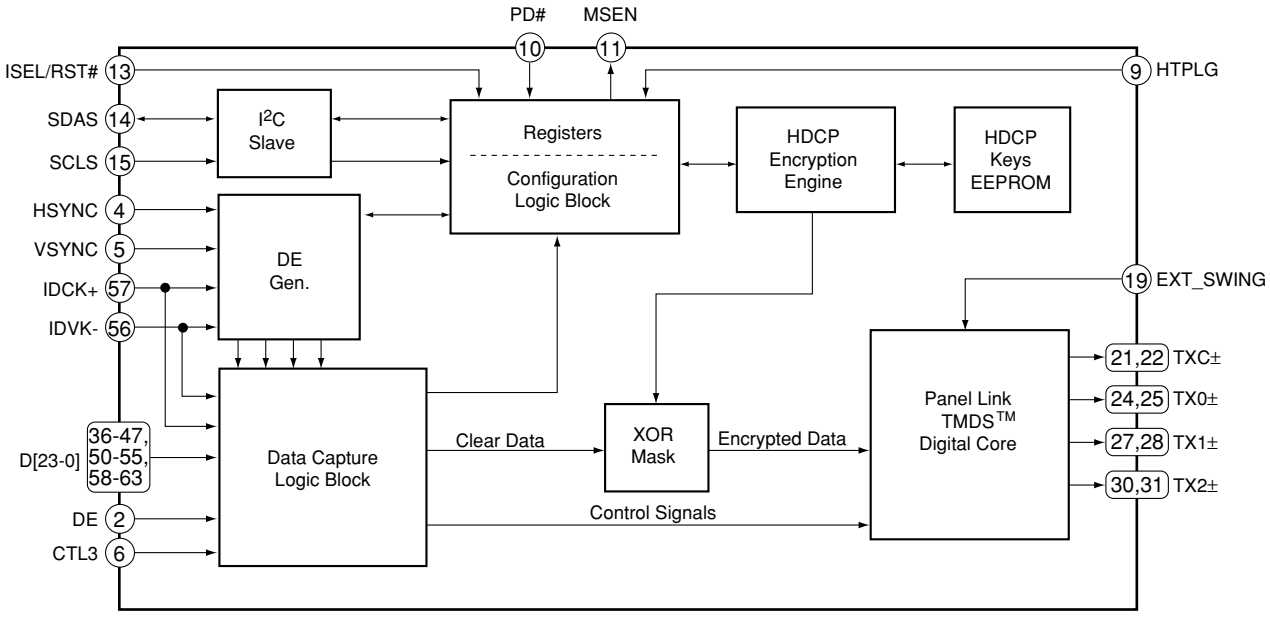
■ SII170BCLG64 (MR MAIN ASSY : IC7202)

• DVI Tx

● Pin Arrangement (Top view)



● Block Diagram



● Pin Function

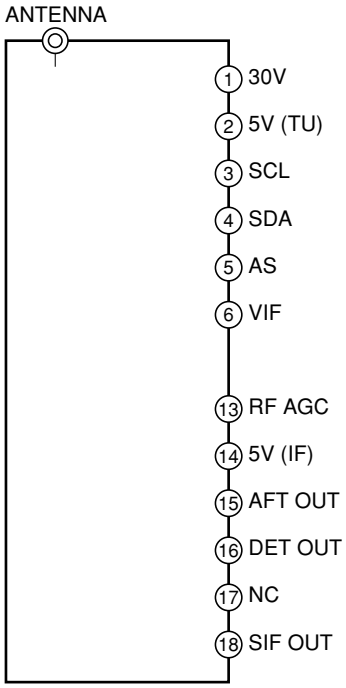
No.	Pin Name	I/O	Pin Function
1	VCC	–	Digital power supply (3.3V)
2	DE	I	Data enable
3	VREF	I	3.3V fixed
4	HSYNC	I	Horizontal sync. control signal input
5	VSYNC	I	Vertical sync. control signal input
6	CTL3	I	External CTL3 input
7	NC	–	No connection
8	NC	–	No connection
9	HTPLG	I	Monitor chrage input
10	PD#	I	Power down input (Active low)
11	MSEN	O	Monitor sense output (open-collector output)
12	VCC	–	Digital power supply (3.3V)
13	ISEL/RST#	I	I2C interface selecting input High: I2C interface is active
14	SDAS	I/O	DDC I2C data input/output
15	SCLS	I	DDC I2C clock input
16	GND	–	Digital ground
17	PGND1	–	PLL analog ground
18	PVCC1	–	Analog power supply for PLL of primary side (3.3V)
19	EXT_SWING	I	Voltage regulation adjustment
20	AGND	–	Analog ground
21	TXC–	O	Differential signal clock output of TMDS Low voltage
22	TXC+	O	Differential signal clock output of TMDS Low voltage
23	AVCC	–	Analog power supply (3.3V)
24	TX0–	O	Differential signal clock output of TMDS Low voltage
25	TX0+	O	Differential signal clock output of TMDS Low voltage
26	AGND	–	Analog ground
27	TX1–	O	Differential signal clock output of TMDS Low voltage
28	TX1+	O	Differential signal clock output of TMDS Low voltage
29	AVCC	–	Analog power supply (3.3V)
30	TX2-	O	Differential signal clock output of TMDS Low voltage
31	TX2+	O	Differential signal clock output of TMDS Low voltage
32	AGND	–	Analog ground
33	VCC	–	Digital power supply (3.3V)
34	RESERVED	I	Reserved pin for Silicon Image Normally, fixed to low.
35	GND	–	Digital ground
36	D23	I	24-bit pixel bus input
37	D22	I	24-bit pixel bus input
38	D21	I	24-bit pixel bus input
39	D20	I	24-bit pixel bus input
40	D19	I	24-bit pixel bus input

No.	Pin Name	I/O	Pin Function
41	D18	I	24-bit pixel bus input
42	D17	I	24-bit pixel bus input
43	D16	I	24-bit pixel bus input
44	D15	I	24-bit pixel bus input
45	D14	I	24-bit pixel bus input
46	D13	I	24-bit pixel bus input
47	D12	I	24-bit pixel bus input
48	PGND2	–	PLL analog ground
49	PVCC2	–	Analog power supply for filter PLL (3.3V)
50	D11	I	24-bit / 12-bit pixel bus input
51	D10	I	24-bit / 12-bit pixel bus input
52	D9	I	24-bit / 12-bit pixel bus input
53	D8	I	24-bit / 12-bit pixel bus input
54	D7	I	24-bit / 12-bit pixel bus input
55	D6	I	24-bit / 12-bit pixel bus input
56	IDCK–	I	Data clock - input
57	IDCK+	I	Data clock + input
58	D5	I	24-bit / 12-bit pixel bus input
59	D4	I	24-bit / 12-bit pixel bus input
60	D3	I	24-bit / 12-bit pixel bus input
61	D2	I	24-bit / 12-bit pixel bus input
62	D1	I	24-bit / 12-bit pixel bus input
63	D0	I	24-bit / 12-bit pixel bus input
64	GND	–	Digital ground

AXF1150 (MR MAIN ASSY : U4401)

• Front End

● Pin Arrangement



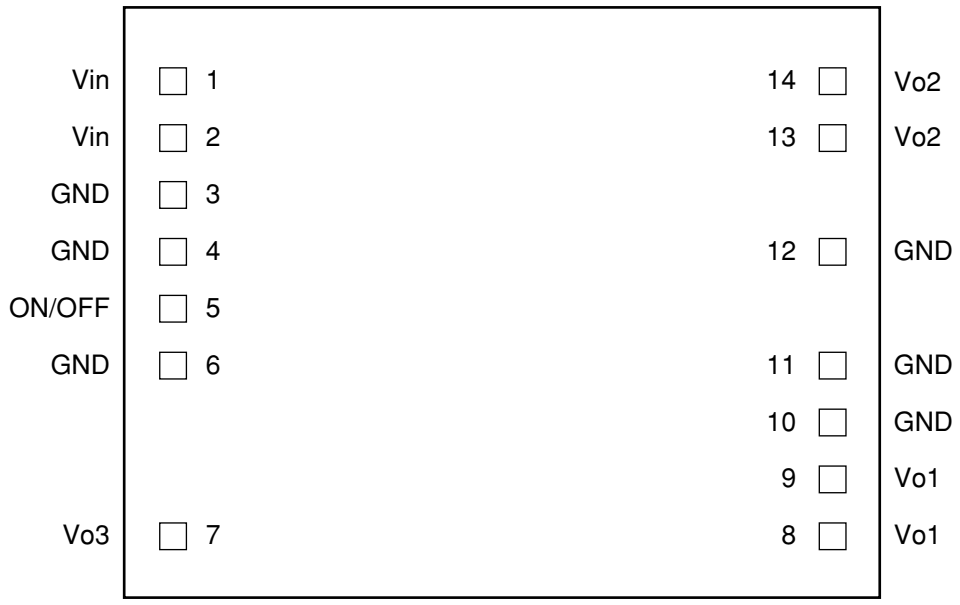
● Pin Function

No.	Pin Name	Pin Function
1	30V	Power supply for 30V
2	5V (TU)	Power supply for tuner
3	SCL	Terminal for I2C bus control
4	SDA	
5	AS	
6	VIF	VIF output
13	RF AGC	RF AGC terminal
14	5V (IF)	Power supply for IF
15	AFT OUT	Analog AFT output
16	DET OUT	VIDEO output (Typical = 1.0Vp-p)
17	NC	No connection
18	SIF OUT	SIF output

■ AXY1117 (MR MAIN ASSY: U4201)

• 3 Outputs DD Control Unit

● Pin Arrangement

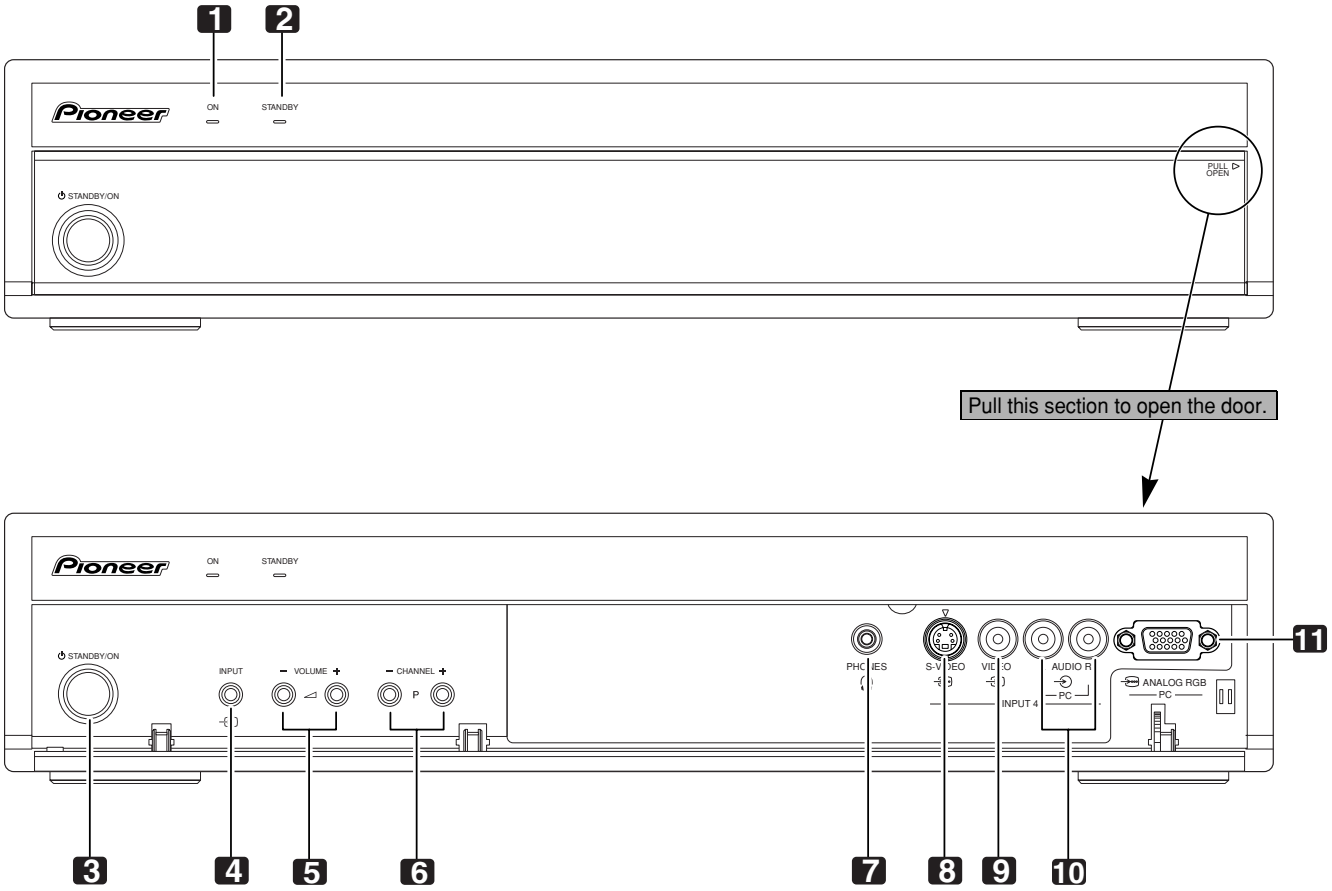


● Pin Function

No.	Pin Name	Pin Function
1	Vin	Input
2	Vin	
3	GND	Ground for input side
4	GND	
5	ON/OFF	Output ON/OFF
6	GND	Ground for output side
7	Vo3	1.8V output
8	Vo1	3.3V output
9	Vo1	3.3V output
10	GND	Ground for output side
11	GND	
12	GND	
13	Vo2	1.2V output
14	Vo2	1.2V output

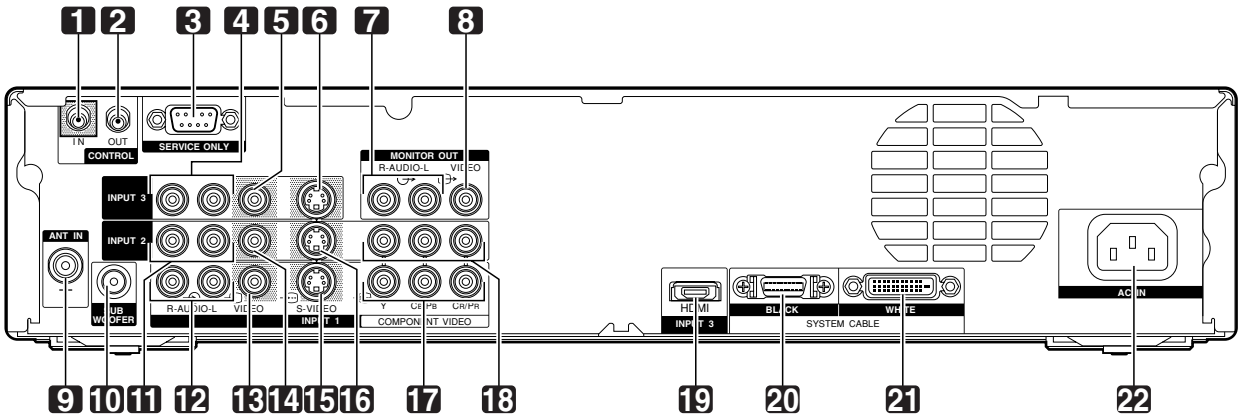
8. PANEL FACILITIES

■ Front view



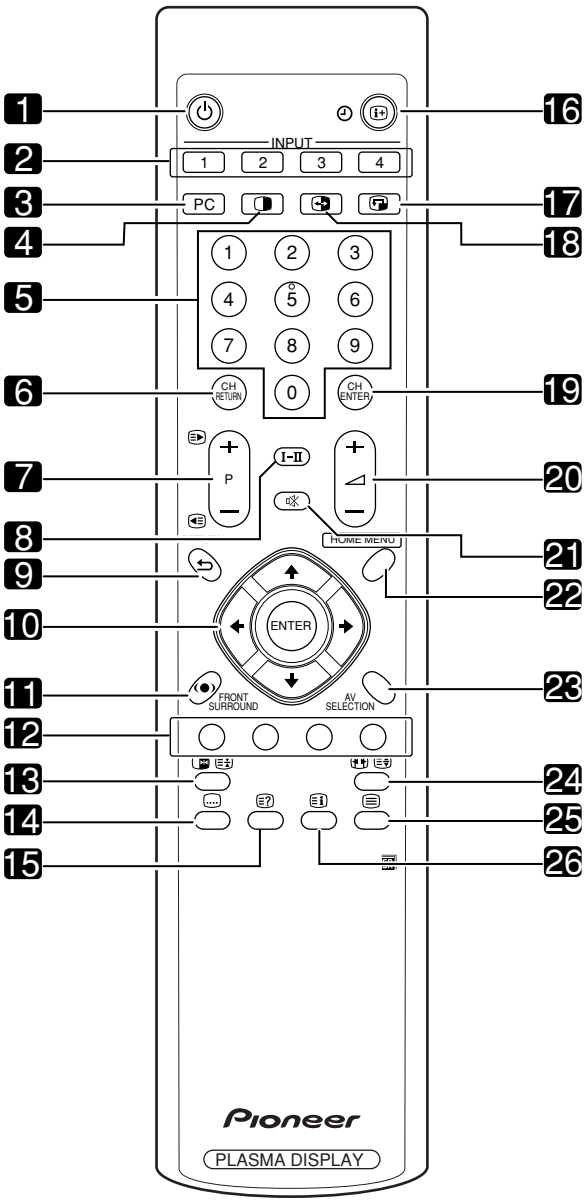
1 POWER ON indicator
2 STANDBY indicator
3 **STANDBY/ON** button
4 **INPUT** button
5 **VOLUME +/–** buttons
6 **CHANNEL +/–** buttons
7 PHONES output terminal
8 INPUT 4 terminal (S-VIDEO)
9 INPUT 4 terminal (VIDEO)
10 INPUT 4/PC INPUT terminals (AUDIO)
11 PC INPUT terminal (ANALOG RGB)

■ Rear view



1 CONTROL IN terminal
2 CONTROL OUT terminal
3 RS-232C terminal (used for factory setup)
4 INPUT 3 terminals (AUDIO)
5 INPUT 3 terminal (VIDEO)
6 INPUT 3 terminal (S-VIDEO)
7 MONITOR OUT terminals (AUDIO)
8 MONITOR OUT terminal (VIDEO)
9 ANT (Antenna) IN terminal
10 SUB WOOFER output terminal
11 INPUT 2 terminals (AUDIO)
12 INPUT 1 terminals (AUDIO)
13 INPUT 1 terminal (VIDEO)
14 INPUT 2 terminal (VIDEO)
15 INPUT 1 terminal (S-VIDEO)
16 INPUT 2 terminal (S-VIDEO)
17 INPUT 1 terminals (COMPONENT VIDEO: Y, CB/PB, CR/PR)
18 INPUT 2 terminals (COMPONENT VIDEO: Y, CB/PB, CR/PR)
19 INPUT 3 terminal (HDMI)
20 SYSTEM CABLE terminal (BLACK)
21 SYSTEM CABLE terminal (WHITE)
22 AC IN terminal

■ Remote control unit



1 ⏻
Turns on the power to the Plasma Display or places it into standby mode.

2 INPUT 1, 2, 3, 4
Selects an input source of the Plasma Display. (INPUT1, INPUT2, INPUT3, INPUT4).

3 PC
Selects the PC terminal as an input source.

4 ◑
Switches the screen mode among 2-screen, picture-in-picture, and single-screen.

5 0 - 9
Switches on the power to the Plasma Display.
TV/External input mode: Selects a channel.
TELETEXT mode: Selects a page.

6 CH RETURN
Returns to the previous channel.

7 P +/P –
TV/External input mode: Selects a channel.
▶/◀
TELETEXT mode: Selects a page.

8 I-II
Sets the sound multiplex mode.

9 ⮌ (RETURN)
Restores the previous menu screen.

10 ↑/↓/←/→
Selects a desired item on the setting screen.
ENTER
Executes a command.

11 FRONT SURROUND
Switches the Front Surround mode.

12 Color (RED/GREEN/YELLOW/BLUE)
TELETEXT mode: Selects a page.

13
Freezes a frame from a moving image. Press again to cancel the function.
TELETEXT mode: Stops updating Teletext pages. Press again to release the hold mode.

14
Jumps to the Teletext subtitle page.

15
TELETEXT mode: Displays hidden characters.

16
Displays the channel information.

17
Moves the location of the small screen when in the picture-in-picture mode.

18
Switches between the two screens when in the 2-screen or picture-in-picture mode.

19 CH ENTER
Executes a channel number.

20 +/–
Sets the volume.

21
Mutes the sound.

22 HOME MENU
TV/External Input mode: Displays the Menu screen.

23 AV SELECTION
Selects audio and video settings.
(AV mode: STANDARD, DYNAMIC, MOVIE, GAME, USER. PC mode: STANDARD, USER.)

24
TV/External input mode: Changes the wide screen size.
TELETEXT mode: Switches Teletext images. (full/upper half/lower half)

25
Selects the TELETEXT mode.
(all TV image, all TEXT image, TV/TEXT image)

26
TELETEXT mode: Displays an Index page for the CEEFAX/FLOF format. Displays a TOP Over View page for the TOP format.

NOTE: When using the remote control unit, point it at the Plasma Display.

A

B

C

D

E

F

■ Cleaning

• Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools	Remark
Fans	Cleaning paper : GED-008	Refer to "2.3 EXTERIOR SECTION" , "7.1.2 DISASSEMBLY SECTION".